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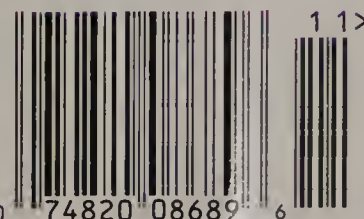
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Macworld PODCASTS



Podcast: The New iPhones

Chris Breen and other *Macworld* editors discuss the new phones. (go.macworld.com/5cand5s).

We also recommend:

Podcast: Extreme Tech in the Middle of Nowhere (go.macworld.com/extreme).

Video: Hands-On With Sony's QX10 Lens Camera (go.macworld.com/qx10).

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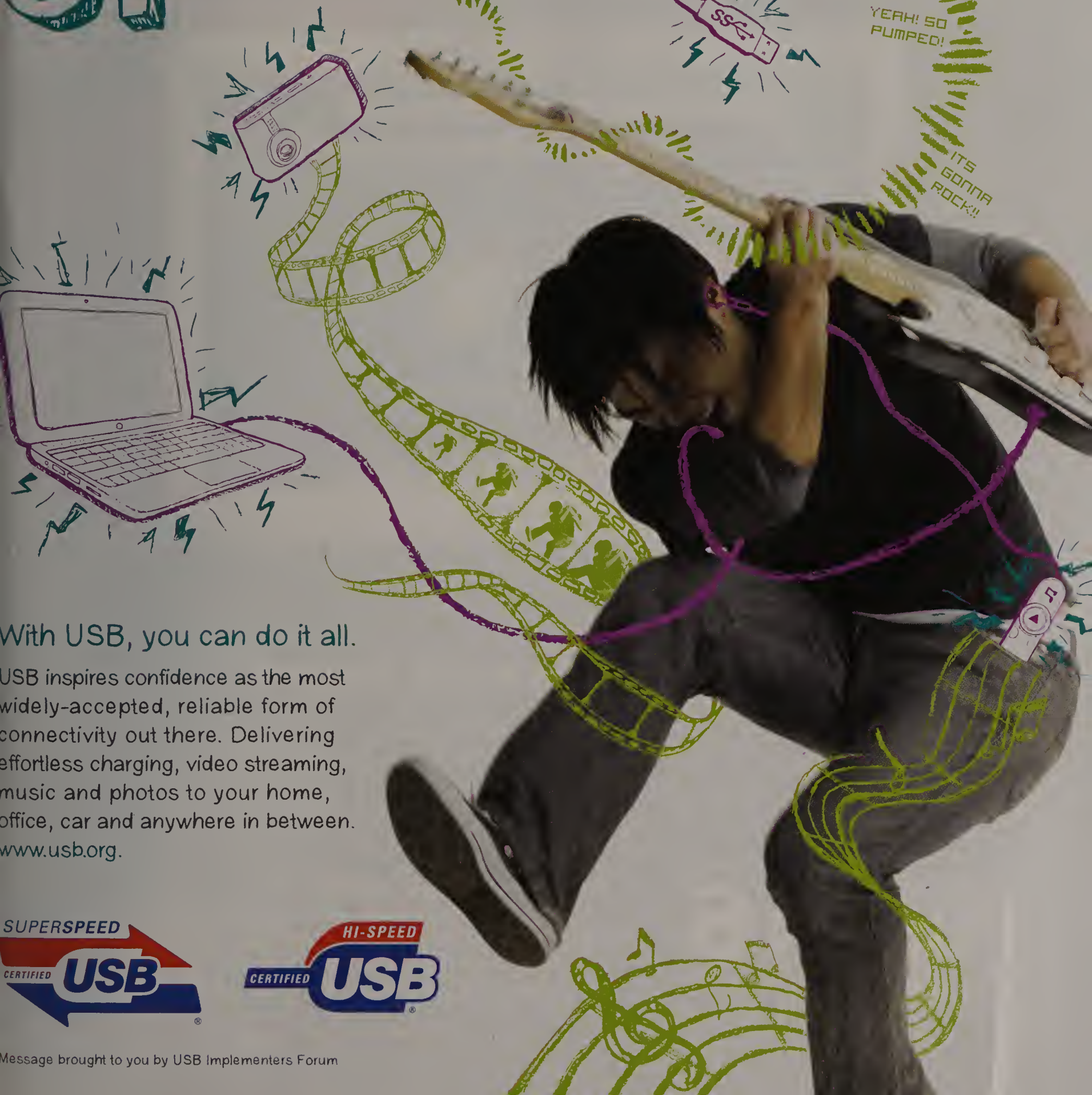
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Amber Alerts: Don't Turn Them Off

Why iPhone users should get emergency notifications in the middle of the night.

One Monday night not long ago, after I had fallen asleep, my Twitter timeline exploded briefly. Folks on the West Coast were unhappy that their iPhones had blasted to life with noisy notifications—alerts that had apparently ignored their Do Not Disturb settings.

The reason: Authorities had issued an Amber Alert after discovering a horrific crime scene and evidence of a potential kidnapping. iOS and other smartphone operating systems have supported Amber Alerts for a while, but they also require carrier support; some carriers introduced support for the alerts only recently.

The immediate reaction to an unexpected alert on your iPhone at 11 p.m. is understandably surprise, annoyance, and maybe even anger. But armed with a little knowledge about why the alerts exist, what they mean, and how you can control them, you'll likely be less agitated the next time one rings out on your phone.

What Is an Amber Alert?

Officially, the name should be written as AMBER Alert, because it's a "backronym" for America's Missing: Broadcasting Emergency Response. But the alerts were originally named for Amber Hagerman, a 9-year-old girl who was abducted and murdered in Texas 17 years ago. The alert system is also known as CAE, for Child Abduction Emergency.

Police organizations issue Amber Alerts when they determine that a child has been abducted; the alerts include the name and description of the victim, a description of the suspected abductor, and information about the suspect's vehicle, when available. Until recently the alerts were distributed through radio (terrestrial, satellite, and Internet) and on broadcast and cable TV. Now, in addition, the alerts can come via email, electronic



Government agencies and companies such as Apple should work to make emergency alerts more palatable.

traffic signs, digital billboards, Facebook, and Google. And since January 2013, they transmit through the Wireless Emergency Alerts system (also called the Commercial Mobile Alert System), which supports the dissemination of emergency messages via cell phones. The system permits the government to issue three kinds of alerts: Amber Alerts, alerts involving "imminent threats to safety of life," and alerts issued by the president of the United States.

The iPhone gained support for WEA with iOS 6. Carriers aren't required to support the system, but all the major ones do.

Such alerts are rare. President Obama hasn't sent any nationwide texts yet, and Amber Alerts are localized to the geographic region where the authorities believe they can offer the most benefit.

The disadvantages of such alerts are that they are generally accompanied by a startling sound, and that they arrive at

unpredictable times. New Yorkers recently received a similar shock when an Amber Alert sounded just before 4 a.m.

What You Should Do

The biggest risk is that iPhone owners (and owners of other phones with WEA support) will disable Amber Alerts because of the annoyance factor. And yes, you can disable the alerts if you don't want them: Tap *Settings*, choose *Notifications*, and scroll all the way down. Of course, if people turn them off, Amber Alerts will become less effective. That 4 a.m. Amber Alert in New York prompted a tip that led to the capture of the alleged abductor.

The government's desire to make emergency alerts loud and invasive is understandable. But given that we can turn the messages off, perhaps government agencies and companies such as Apple should work to make such alerts more palatable. An option to use a standard beep instead of a siren sound, for example, or to permit alerts to arrive quietly when Do Not Disturb is enabled, could make leaving alerts turned on far easier for iPhone owners, without diminishing the alerts' potential impact.

It doesn't help that WEA messages have only 90 characters at most, far from enough to include all the relevant details. (That's because the system doesn't use standard SMS; it's a special system that isn't subject to delays or congestion from other messages.) Those 90 characters result in alerts as tightly compressed as a classified ad, with no link to further information.

Clearly, the system could improve. But you might decide to leave Amber Alerts enabled on your device even if improvements never come. The Find My iPhone feature doesn't respect your phone's Do Not Disturb setting, either. If it's good enough for your phone, it's good enough for someone else's child.

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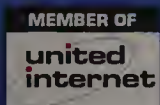


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iPhone-a-Palooza

Readers tell us the features they're most excited to see on the new iPhone. In other corners, the new Steve Jobs movie failed to impress, and one reader found a hidden iPhone feature while playing cards.

THE JOBS MOVIE: NOT SO SPECIAL

For all Jobs did for the entertainment industry, it's a travesty that Zuckerberg got a biopic directed by David Fincher and that this film is directed by that guy who directed that other movie no one's ever heard of. Even worse, it ends in 2001!

nonlinearmind3o8n, via Macworld.com

THE LOW-COST IPHONE

Many companies have approached the features vs. price problem by introducing a new, lower-price brand.

If the marketing is well executed, customers for the lower-price line will feel good knowing they're "really" getting an Apple phone, while high-end customers won't feel their brand's status has been cheapened.

RobLewis, via Macworld.com

Apple makes most of the profit in the industry, despite selling less than half the phones (and probably selling only in the single digits as a percent of global sales of smartphones by year's

end) because it makes more per phone than other companies do.

You can look at this as either that Apple is overcharging, or that consumers see value that isn't revealed in simply adding up the manufacturing and materials costs (and the truth is probably somewhere between the two).

This perceived value beyond the physical phone has a lot to do with iOS and the Apple ecosystem. Apple could therefore easily make a phone that was less expensive to produce, but one that still was every bit an iPhone.

The changes I would suggest are: Make it non-Retina. Make the back plastic. Allow it to be slightly thicker and increase the battery size. Bill it as

iPhone 5s EXCITEMENT

Readers share the features they're looking forward to.

@ZombieJohnsus: Fingerprint unlock and Apple Store payments.

@anthonywatkins: Well I'd like to see a larger screen on the iPhone 5s, like maybe 4.5". But I doubt that will be on the 5s. Probably the 6.

@SoCalMacGuy: The fingerprint reader and camera of the 5s look like fun.

@apfwebs: Most exciting new iPhone feature: 5s camera.

a "rugged" iPhone with better battery life. Great for kids, dudes, and the accident-prone.

graxspoo, via Macworld.com

THROUGH THE LENS: IPHONE OF CLUBS

Phyllis Goldberg discovered a hidden iPhone feature while playing cards outdoors: "When my friends and I play Contract Rummy outdoors, our iPhones are essential to the game. They keep the cards from blowing away!"

Have a great Apple-centric photo? Send it to letters@macworld.com, and we may feature it in a future issue.



CORRECTION

On page 58 of the October issue, the mouse rating for Flutter 0.5.54 should have been 🐭🐭🐭.

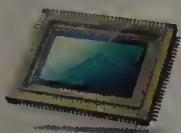
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MacUser

News and Analysis About Macs, OS X, and Apple



Bride of Frankenmac: Assembling a PC That Runs Mac OS X

BY JAMES GALBRAITH

For a long time, Mac Pro users have asked themselves, “When will Apple update its professional desktop line?”

The wait is nearly over. Apple says that a brand-new Mac Pro will be available before the end of 2013.

But the new Mac Pro is not the hulking beast we’re familiar with; rather, it’s a model of compactness (see page 15). The main concern about it is the lack of internal expansion and customization options. Instead of four internal hard-drive bays, the new Mac Pro uses built-in flash storage. Users must connect any additional drives or PCI cards externally.

That means some tough decisions: Buy the new Mac Pro and purchase external drives and an expansion chassis? Or stick it out a few more years with the current

Mac Pro and make do with its aging tech?

Here’s another option—one that gives you today’s technology now, with competitive performance, and that costs considerably less than the 2012 Mac Pro. It may violate Mac OS X’s end-user license agreement, but you can build your own computer that runs Mac OS X, using off-the-shelf PC hardware.

We in the Macworld Lab did just that, and although we found the job to be more suited to a PC tech than to most creative Mac Pro users, a surprising number of useful resources are available to help you roll your own Mac OS X PC.

Back in 2008, then–senior editor (now a senior contributor) Rob Griffiths put together a system he dubbed Frankenmac. So we call the machine we built the Bride of Frankenmac.

How We Built It

We’re lucky here in the lab to have folks like PCWorld Lab Manager Tony Leung, who has years of experience assembling PCs from scratch. The process is fairly complex. But online resources such as tonymacx86.com and insanelymac.com are very helpful, as are the knowledgeable and supportive users of their forums, who have been able to create Haswell-based computers running Mavericks. Lifehacker.com is another good resource, as it keeps an updated list of working components, plus a list of DIY resources.

In the lab, we found all the pieces and parts we needed. Here, then, is the parts list for the Bride of Frankenmac:

- > Asus P8Z77-VPro/Thunderbolt motherboard with USB 3.0, Thunderbolt, and seven PCI slots

- > Quad-core Intel Core i7-3770 processor
- > EVGA Nvidia GeForce 660 Ti graphics card
- > Seagate Barracuda ST11000DM003 7200-rpm hard drive
- > Blu-ray drive
- > 6GB of Crucial Ballistix Sport DDR-1600 RAM
- > 750W Antec EarthWatts power supply
- > Cooler Master ATX midtower case with room for up to eight drives

These parts are available from resellers like Newegg.com for about \$1200 in all—some \$1300 less than the price of Apple's entry-level 2012 Mac Pro.

How Fast Is It?

To compare the Bride of Frankenmac's performance with that of the shipping Mac Pro, we used our system performance benchmarking suite, Speedmark 8.

Our custom-built OS X computer was faster than the \$2499 Mac Pro in all 15 tests in Speedmark 8—overall, it was 23 percent faster than the Mac Pro, though a few tests were close.

When we upped the resolution on the Portal 2 test and maxed out the settings, the Bride of Frankenmac was 65 percent faster than the Mac Pro.

We also swapped the graphics cards between the two systems to see how that would affect results. Our standard Portal 2 test results were the same, regardless of the card, so the bottleneck was the CPU, not the GPU. When we cranked up the resolution and settings, the results followed the card—the Nvidia

card from the Bride of Frankenmac was much faster than the Mac Pro's ATI card, regardless of which system it was in.

Comparing the results with those for a high-end 12-core Mac Pro—a \$3799 system with two 2.4GHz 6-core Intel Xeon processors, 12GB of RAM, and the same 1TB hard drive and ATI Radeon

then wake it up. We also had to use the same trick every time we rebooted.

Unlike an Apple-built computer, our Bride of Frankenmac is not covered by an umbrella warranty. If the power supply conks out, we'll need to talk to Antec. Similarly, if anything else breaks or stops working, it'll be up to us to deal with the



card as the \$2499 Mac Pro—we saw that our Bride of Frankenmac outperformed it, as well. The Bride of Frankenmac was 14 percent faster overall than this Mac Pro, but the Mac Pro was faster in a few tests—mainly those taking advantage of its 12 processing cores. Cinebench's OpenGL test, for example, was 41 percent faster on the Mac Pro.

For kicks, we installed a Kingston HyperX 3K SH103S3/240G SSD in both the Bride of Frankenmac and the 12-core Mac Pro, and reran the Speedmark tests. While the SSD-equipped Mac Pro and Bride of Frankenmac were 16 and 13 percent faster, respectively, than their hard-drive-equipped selves, the SSD Bride of Frankenmac was still 12 percent faster overall than the SSD Mac Pro.

Hurdles and Cautions

The Mac Pro's ATI card didn't work right away in the Bride of Frankenmac, but we found help in online forums. The solution wasn't elegant; it required booting onto a USB stick that we'd set up for the initial install and pressing the power button twice to put the system to sleep and

Not a Pretty Face The Bride of Frankenmac (right) isn't much of a looker, but its performance makes up for its appearance.

individual component manufacturers.

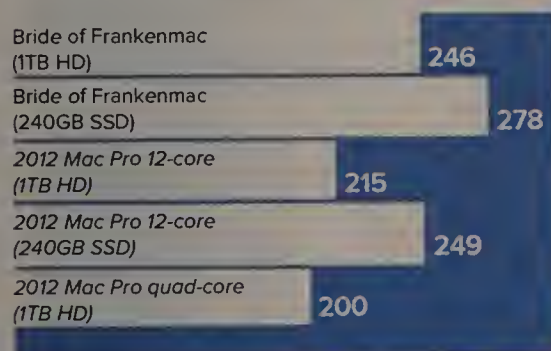
Future OS X updates could also prove problematic for our custom setup. When an OS X update becomes available, we'll have to wait a few days and monitor the forums to see if other folks are running into problems with their custom systems.

Conclusions

Building your own PC running OS X is not for everyone, but if you're comfortable with breaking OS X's end-user license agreement and you know your way around a PC's bootloader and BIOS settings, assembling an expandable tower computer based on OS X seems to be an option. The price is certainly right, and the performance in most cases can equal or surpass that of Apple's current Mac Pros. Time will tell what the price and performance of the 2013 Mac Pro will be, but we know that it will not offer the internal expansion that, for most users, was the Mac Pro's most attractive asset.

Macworld Lab Test

Benchmarks: Speedmark 8



Higher results/longer bars are better. Macworld Lab testing by James Galbraith, Albert Filice, and Jeff Sandstoe.

Towers of Power: A Look at Past Mac Tower Computers

BY ROMAN LOYOLA

Apple has a long history of making tower computers that weren't just tall, heavy-duty systems aimed only at power users. The design and style of its towers have always made them stand out from a skyline of beige PC towers. Here's how those designs have evolved.

Macintosh Quadra 700

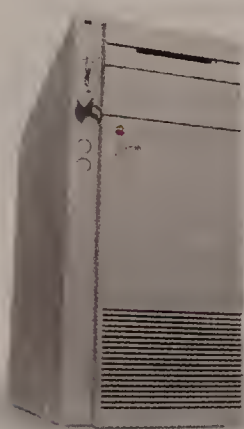
1991 You might not consider the Quadra 700 to be a tower, since it was essentially a Mac IIcx case



standing on its side. The Quadra 700 was released in October 1991, and had a 25MHz Motorola 68040 processor. It had two NuBus slots and a PDS (processor-direct slot), and employed SCSI to connect to external hard drives.

Macintosh Quadra 950

1992 The follow-up to the Quadra 900, the 950 is the machine that some people consider to be the first true Mac tower. If you had a bunch of NuBus cards, this was the Mac to get—the



Quadra 950 (released in May 1992) had five NuBus slots, as well as a PDS. The key locked the power switch so that unauthorized people couldn't turn it on or off. The key also locked out input devices.

Macintosh Quadra 840AV

1993 Apple issued this model just a few months after releasing the Quadra 800 in

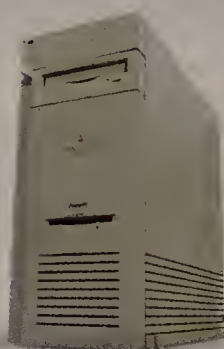
July 1993. The "AV" in the name referred to the computer's S-Video and composite-video ports—ports that weren't available in non-AV Macs.

The Quadra 800 was a more affordable minitower alternative to the Quadra 950, but I have bad memories of this tower's case. The cover slid on and off awkwardly, and accessing the components was hard. It contained three NuBus slots and one PDS.



Workgroup Server 9150

1994 This was the first Apple server that wasn't based on a consumer model. (Apple also declined to go the reverse route and make a consumer



Mac based on the 9150's design.) Released in April 1994, the 9150 offered four NuBus slots and a PDS. Buyers had a choice of an 80MHz 601 PowerPC CPU or a 120MHz 601+ PowerPC processor.

Network Server 500

1996 The Network Server 500 (released in April 1996) was designed for enterprise networks (it cost some \$11,000). It didn't come with Mac OS installed; Apple instead used AIX, an IBM-developed Unix operating



system. The machine had seven half-height/three full-height bays and six PCI slots, and it weighed over 80 pounds.

Power Macintosh 6500

1996 This case design made its debut with the Performa 6400 in August 1996. Computers with this tower design carried a built-in subwoofer, and PCI slots (two in this model) replaced the NuBus slots. The Power Macintosh 6500 also provided an option to insert an Iomega Zip drive, which wasn't found on the Performa machines.



Power Macintosh 8600

1997 Apple announced the 8600 along with the Power Macintosh 9600 in February 1997. The



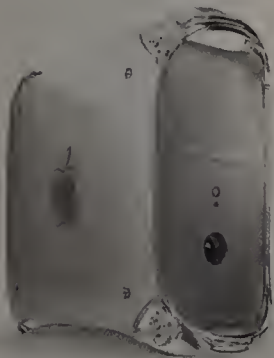
company then went on to use the same case design for the Power Macintosh G3, which replaced the 8600 and 9600 in November 1997. This was the last beige tower Apple ever created.

Power Macintosh G3 (Blue and White)

1999 The Bondi Blue iMac was unveiled in May 1998, and anticipation was high in regards to how Apple



would apply its new design aesthetic to its tower Macs. The answer came in January 1999, when Apple updated the Power Macintosh G3 with a new blue and white, easy-access design. The basis of this case design lived on in Apple's towers for the next five years.



Power Macintosh G4 (Quicksilver)

2004 In September 1999, the first Power Macintosh G4 model came in a case similar to that of the Power Mac G3,

but in a graphite color. Nearly two years later, Apple unveiled a new case, the Quicksilver Power Macintosh G4; this version had four hard-drive bays, one optical-drive bay, one Zip-drive bay, four PCI slots, and one AGP slot.



Power Macintosh G4 (Mirrored Drive Doors)

2002 When you looked at this machine, two features immediately grabbed your attention: the mirrored doors on the Mac's drive bays,

and the four holes near the bottom. The mirrors on the doors were purely cosmetic, serving no practical purpose. The same could be said about the four holes, though the air intake was located just underneath the tower's face, so the holes could work with that.

Power Macintosh G5

2003 The aluminum tower made its debut in June 2003, and Apple is still using this tower design for its Mac Pro units—at least until later this year. (The company

renamed the tower the Mac Pro when it switched to Intel processors.) At one point during the Power Macintosh G5's run, Apple used a liquid-cooling system for its CPUs.



Mac Pro






2013 Apple is taking a fresh, surprising new approach with its latest tower design. The new Mac Pro relies on Thunderbolt 2 for expansion—no internal options are

available (see page 12 for some additional discussion).

The machine should be released by the end of this year. For a full preview, see go.macworld.com/macpro2013.



Macs: Current Lineup

PRODUCT	SPECS	RATING	PRICE	DISPLAY	SPEEDMARK 8 ¹	MORE INFO
DESKTOP						
iMac 	Intel Core i5/2.7GHz (quad-core)	★★★★½	\$1299	21.5 inches	194	go.macworld.com/imac212712
	Intel Core i5/2.9GHz (quad-core)	★★★★½	\$1499	21.5 inches	204	go.macworld.com/imac212912
	Intel Core i5/2.9GHz (quad-core)	★★★★	\$1799	27 inches	238	go.macworld.com/imac272912
	Intel Core i5/3.2GHz (quad-core)	★★★★½	\$1999	27 inches	224	go.macworld.com/imac273212
Mac Mini 	Intel Core i5/2.5GHz (dual-core)	★★★★	\$599	Not included	131	go.macworld.com/mini2512
	Intel Core i7/2.3GHz (quad-core)	★★★★	\$799	Not included	164	go.macworld.com/mini2312
Mac Pro 	Intel Xeon/3.2GHz (quad-core)	★★★★½	\$2499	Not included	200	go.macworld.com/macpro3212
	Intel Xeon/2.4GHz (12-core)	★★★★½	\$3799	Not included	215	go.macworld.com/macpro2412
PORTABLE						
MacBook Air 	Intel Core i5/1.3GHz, 128GB	★★★★½	\$999	11 inches	165	go.macworld.com/air1281113
	Intel Core i5/1.3GHz, 256GB	★★★★½	\$1199	11 inches	165	go.macworld.com/air2561113
	Intel Core i5/1.3GHz, 128GB	★★★★½	\$1099	13 inches	166	go.macworld.com/air1281313
	Intel Core i5/1.3GHz, 256GB	★★★★½	\$1299	13 inches	166	go.macworld.com/air2561313
MacBook Pro 	Intel Core i5/2.5GHz (dual-core)	★★★★½	\$1199	13 inches	121	go.macworld.com/macbook132512
	Intel Core i7/2.9GHz (dual-core)	★★★★	\$1499	13 inches	153	go.macworld.com/macbook132912
	Intel Core i7/2.3GHz (quad-core)	★★★★	\$1799	15 inches	161	go.macworld.com/macbook152312
	Intel Core i5/2.5GHz (dual-core) 128GB	★★★★½	\$1499	13-inch Retina	184	go.macworld.com/macbookret13128
	Intel Core i5/2.6GHz (dual-core) 256GB	★★★★½	\$1699	13-inch Retina	190	go.macworld.com/macbookret132613
	Intel Core i7/2.4GHz (quad-core)	★★★★½	\$2199	15-inch Retina	270	go.macworld.com/macbookret152413
	Intel Core i7/2.7GHz (quad-core)	★★★★½	\$2799	15-inch Retina	284	go.macworld.com/macbookret152713

¹Speedmark 8 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.8 (Mountain Lion). For more information, see go.macworld.com/speedmark8.

Who Got Slighted in the Steve Jobs Movie

BY PHILIP MICHAELS



Although every biopic takes its share of liberties with the facts, *Jobs* doesn't wander too far from the historical record in its big-screen retelling of the Apple cofounder's life. Still, some people and institutions may have a beef with the movie.

Jef Raskin: Jef Raskin appears in two scenes in *Jobs*, the first as the bumbling head of the faltering Macintosh team and the second as he cleans out his desk, having been given the bum's rush. That hardly seems a fair depiction of a man sometimes dubbed the Father of the Macintosh. Raskin's influence on user interfaces, particularly when it came to the Mac's legendary ease of use, is undisputed. He also kept the Mac project going in the early days.

Arthur Rock: Every movie needs a villain, and in *Jobs* that part falls to Arthur

Rock, Apple's bottom-line chairman who butts heads throughout the movie with the more visionary Steve Jobs. But in addition to his role as an early Apple backer, Rock was one of the first venture capitalists to invest in what would become Silicon Valley, and he helped to launch Fairchild Semiconductor and Intel.

Gil Amelio: Apple's CEO for 17 undistinguished months, from 1996 to 1997, appears as a flummoxed chief executive clearly in over his head who is promptly outwitted by Jobs for control of Apple—a portrayal that's fairly accurate.

Michael Scott and Michael Spindler: Michael Scott—Apple's CEO from 1977 to 1981—and Michael Spindler don't appear in *Jobs* at all. In fact, they're the only Apple CEOs to be left out of the film (other than today's chief, Tim Cook).

Ron Wayne: Apple's third cofounder

along with Jobs and Wozniak, Ron Wayne is the forgotten man of Apple's history. Wayne gets nary a mention in the movie, not even a peep about his selling back his stake in Apple to the two Steves just 12 days after the company's founding.

Any woman employed in technology between 1976 and 2001: It's a man's world in *Jobs*, where the only female characters with speaking parts are women who raised Steve Jobs, slept with him, married him, were fathered by him, or answered his phones—though you could argue that the tech world was dominated by men, particularly in the 1970s and 1980s, when much of the film takes place.

Xerox PARC: The two visits by Apple employees—especially one in 1979 that included Steve Jobs—have taken on mythical proportions. But in *Jobs*, that moment takes place off-camera.



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The Tweet Heard 'Round the Stock Market

What a single tweet from investor Carl Icahn may accomplish.

BY MARCO TABINI

In recent months, Apple CEO Tim Cook has had to deal with an increasingly indifferent press and a hostile stock market.

Enter this story's unlikely white knight: takeover tycoon and activist investor Carl Icahn, who, with just one

tweet in August, single-handedly managed to raise the company's stock by nearly 5 percent in less than 24 hours.

The 77-year-old billionaire isn't exactly known for his cozy relationships with CEOs. He has been involved in some of the most contentious takeovers of the past four decades, and has picked fights



Carl Icahn ✓
Carl_C_Icahn

Follow

We currently have a large position in APPLE. We believe the company to be extremely undervalued. Spoke to Tim Cook today. More to come.

White Knight? This tweet from takeover tycoon Carl Icahn sparked a jump in Apple's stock.

with a who's who of corporate giants—Blockbuster, Time Warner, U.S. Steel, and Yahoo. His company has just dropped a lawsuit to prevent entrepreneur Michael Dell from taking private the computer

manufacturer that bears his name.

Yet, here Icahn is, announcing that he has taken a large interest in Apple—estimates have put it north of \$1 billion—and that he seems to like the company's prospects.

Icahn's words come as good news for Apple, given the choir of disappointment of the past 18 months.

Apple's PR department says that it "appreciates the interest and investment of [its] shareholders," and that Cook and Icahn had a "very positive" phone call.

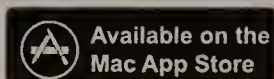
Maybe, just maybe, Icahn is playing against type here, bolstering the world's most prominent tech company instead of simply tearing it down.



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Apple Goes on an Acquisition Spree

BY DAN MOREN

At a conference in May, Apple CEO Tim Cook mentioned that the company had already acquired nine companies in 2013; this summer, it acquired a few more.

Locationary

The Toronto-based Locationary is a startup focused on improving data about local businesses. It pulls the location information from various sources, then aggregates and reconciles it, ensuring that the data provided to users is complete and up-to-date. Such efforts seem important to Apple, whose mapping service continues to suffer from incomplete or inaccurate local data.

Interestingly, Locationary CEO and founder Grant Ritchie penned a piece last fall for tech-industry news site TechCrunch, detailing “5 Big Map App Issues Apple Must Solve.” That article may well have come to the attention of folks in Cupertino. It focused on the difficulty of handling point-of-interest information (including the challenges and complications that arise from nonstandard types of information), merging data sources, and aggregating local data—all issues that Locationary purports to solve.

The Locationary startup seems important to Apple, whose mapping service continues to suffer from incomplete or inaccurate local data.

Locationary isn't the first mapping-related business that Apple has picked up in the past several years. In March, the company acquired WiFiSlam, a service that allows for indoor mapping. And prior to launching Apple Maps, the company had bought a handful of small location-oriented firms, including Placebase,

Poly9, and C3 Technologies.

Cook has apologized for the company's lackluster mapping app, and has said that Apple is working to improve it. Even so, Apple has been surprisingly quiet about any improvements. Announced changes to iOS 7 have mentioned nothing new on the Maps front; in fact, the only recent news about Maps is that it will be present in the forthcoming OS X Mavericks.

Given the public nature of Maps' failings, Apple may need to spend more time talking about what it's doing to beef up the service, especially if it wants to sway users away from competitors such as Google Maps.

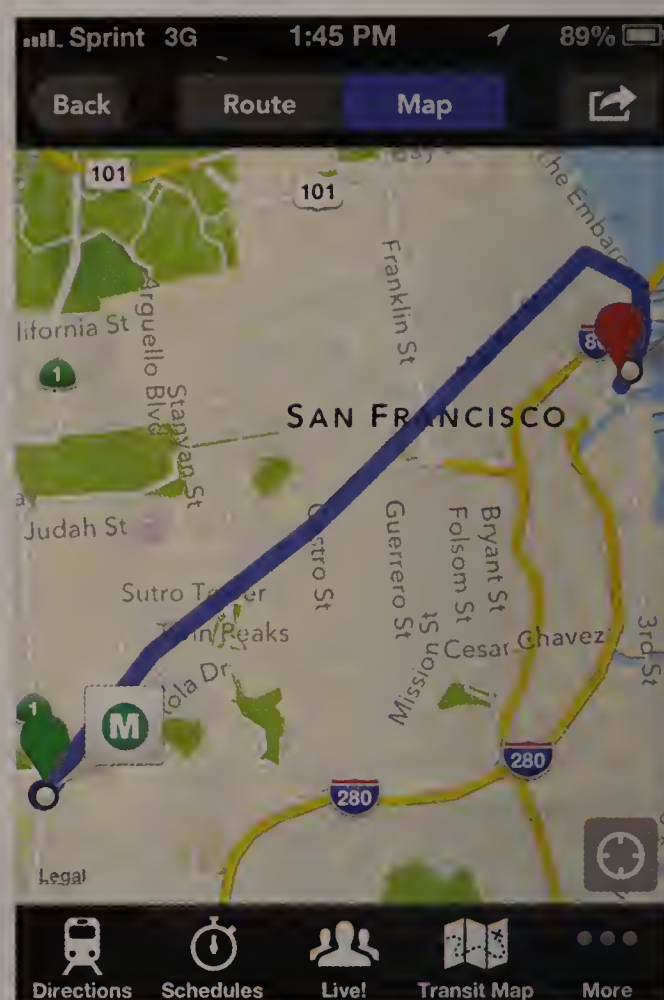
HopStop

Apple has also snapped up HopStop, a maker of cross-platform apps that provide public-transit directions.

As with Locationary, the reason for Apple's acquisition of HopStop is pretty clear: The transition to iOS's built-in mapping systems has been a rough one, compounded by the release of a native

Google Maps app for iOS. Apple's service often looks lackluster next to that of its rival, and public-transit information is a sore spot, since Apple has had to offload that feature to third-party apps, including both Google Maps and HopStop itself.

While average users may overlook many features, maps have become crucial



How to Get There Apple recently acquired HopStop, a maker of apps that provide public-transit directions.

enough to the smartphone experience that awareness of iOS's lack of public-transit directions, coupled with its other mapping issues, has reached the mainstream.

The free, ad-supported HopStop is one of the more well-regarded and extensive transit apps. The service claims to offer information on public transportation in more than 600 cities around the world, which gives Apple a pretty sizable leg up in rolling out its own public-transit directions. HopStop also includes cycling, taxi, and walking directions.

However, since iOS 7 is (at this writing) about to debut and Apple has only now acquired HopStop, built-in public-transit directions are unlikely to surface this year. Apple is probably more inclined to introduce a revamped public-transit directions system next year in iOS 8.

Passif Semiconductor

For an article discussing the acquisition of Passif, a maker of low-energy computer chips that are important for small wireless devices, see *iOS Central*, page 46.

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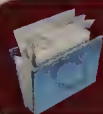
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Hot Stuff

What We're Raving About This Month

Yojimbo 4.0

Bare Bones Software's \$30 (\$20 upgrade) information organizer now has a \$3-per-month Mac-to-Mac sync subscription through Wasabi Sync. You can still use any one of your Macs to sync with Yojimbo for iPad through Wi-Fi. Yojimbo 4.0 is being released directly through Bare Bones' website only. Bare Bones says it will offer its assistance for users who previously bought Yojimbo in the Mac App Store and want to transition to a license for the new version (barebones.com).—LEX FRIEDMAN



Satechi Desk Mat & Mate

The \$35 Satechi Desk Mat & Mate is less a Mac accessory and more a desk accessory, but it ensures that your desk's surfaces remain protected against scratches from your computer. It's made of synthetic leather, it's easy to wipe down, and it comes in eight different colors (satechi.net).—JOEL MATHIS

ACA1

The \$90 ACA1 is a fast, long-range, Mac-compatible 802.11ac Wi-Fi access point. It features two high-gain, dual-band antennas and four amplifiers, to provide up to three times the range of many regular Wi-Fi adapters (amped-wireless.com).

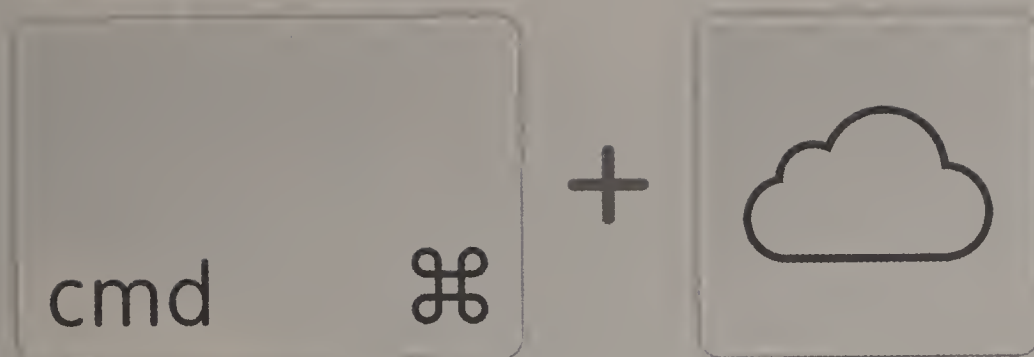
—JOEL MATHIS



Codex

The \$70 Codex is made to protect the 13-inch MacBook Air. (A \$65 11-inch version is also available.) It meets TSA requirements, allowing your MacBook to stay inside the case during airport security checks. Its proprietary zipper design lets you use your laptop while it's still in the case. Foam cushions protect the computer from drops, and a microfiber lining prevents scratches (store.moshimonde.com).—JOEL MATHIS

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NEWS/ENTERTAINMENT

Instacast 1.0.1

★★★★½; \$20; Vemedia; vemedia.com

Apple offers a couple of apps that should make it easy to listen to podcasts: iTunes on the desktop, and Podcasts on iOS. But just try making them work in tandem.

For listening on my iOS devices, I use Vemedia's Instacast for iOS. The software is now on OS X as Instacast for Mac.

Its main interface takes a cue from Apple's Mail, dividing the screen into three vertical panes: On the left is a list of the podcasts you subscribe to, in the middle is a list of available episodes for the selected show, and on the right is information about the selected episode.

Instacast lets you organize episodes in a couple of interesting ways. The first is to create playlists of episodes from your subscriptions. The second is to create smart lists that automatically aggregate episodes based on criteria you define.

By default, the app downloads only the most recent episode of each subscribed podcast; if you play an older episode, it streams from the Internet.

Instacast's sharing features include support for Twitter, App.net, email, iMessage, and a few other Web services.

But it doesn't include any social-oriented discovery features.

Instacast especially shines in syncing across devices. Through a feature aptly named Instacast Cloud, which is free to all registered users, you can sync sub-



scriptions, episodes, and playback status across multiple copies of the app on any supported platform.

Instacast is a great app that deserves a spot on your Mac if you regularly listen to podcasts.—MARCO TABINI

SOCIAL NETWORKING

Moment 1.0.2

★★★★½; \$10; Tapmates; tapmates.com

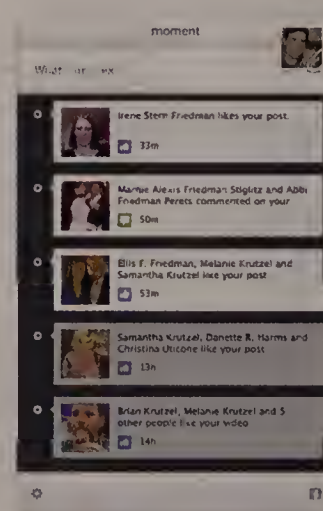
You can find oodles of apps for keeping tabs on Twitter from your Mac, but few for monitoring Facebook. Moment, from Tapmates, is here to help.

Moment lives in your menu bar. It lights up—and sounds an alert—whenever you receive a new Facebook notification. Click the menu icon, and you see your notifications, old and new alike. (Older ones are dimmed to make it easier to spot the new ones.) It's the same list you could expect to see if you viewed your notifications list on the Facebook website.

Click a notification, and the Moment menu vanishes, opening the appropriate Facebook page in your Web browser. It's

a shame Moment doesn't simply display the page directly within the app, although such a feature is clearly beyond the scope of what Moment's developers had in mind.

Where Moment really shines, however, is in facilitating posting to Facebook. To post a photo to your timeline in a flash, just drag the photo onto Moment's menu-bar icon, optionally add a text status to go with it, and click the *Post* button. Or simply click the menu icon,



type your status update, and (optionally) drag in an image. Want to post a video, or a link to a webpage? You can drag those, too.

One nice touch: You can add friends to a post or photo just by typing their names in the Who Were You With? area. Moment autofills the names based on your friends list on Facebook.

Moment is tidy and elegant, and makes quick work of updating your Facebook status and keeping tabs on your notifications.—LEX FRIEDMAN

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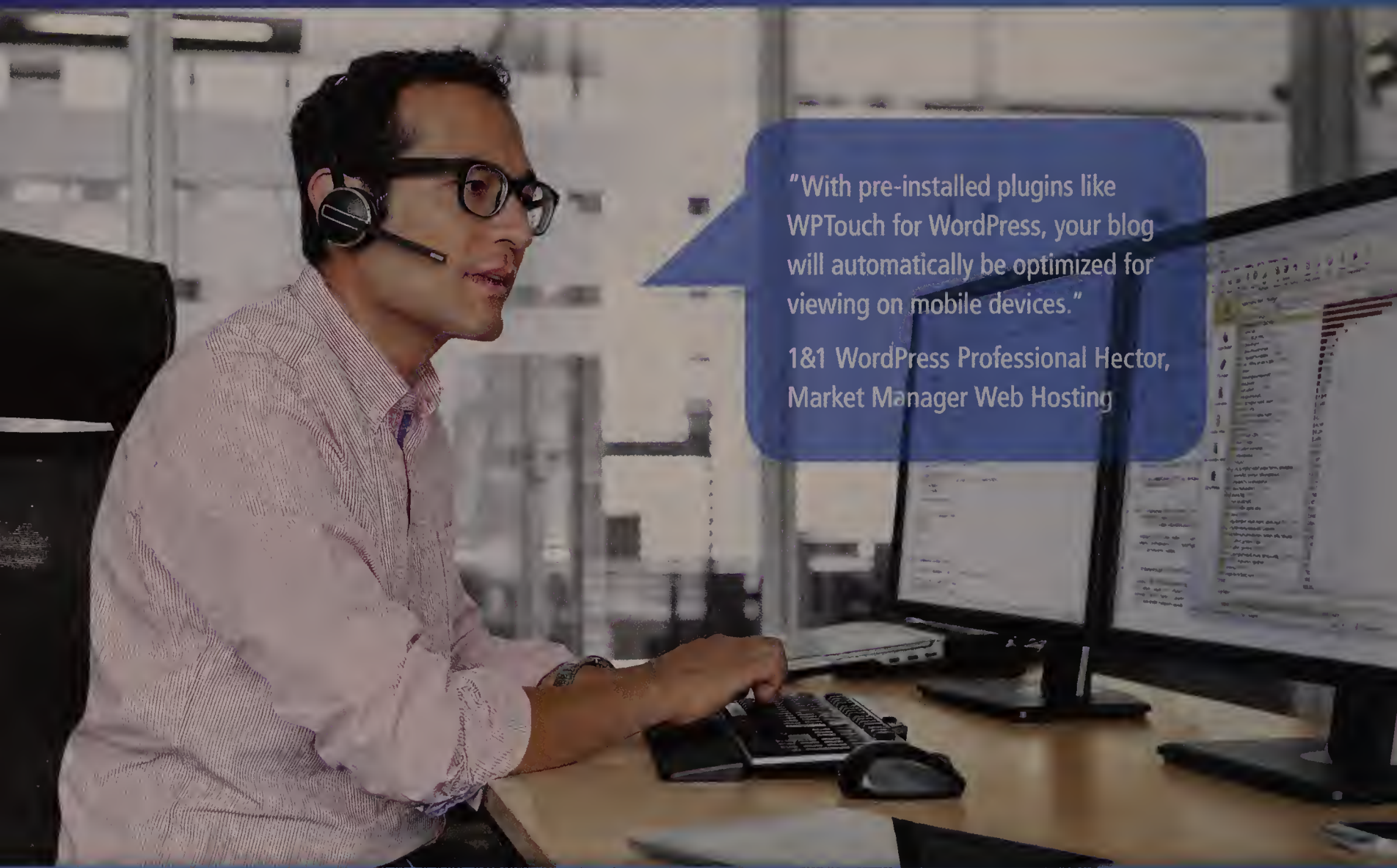
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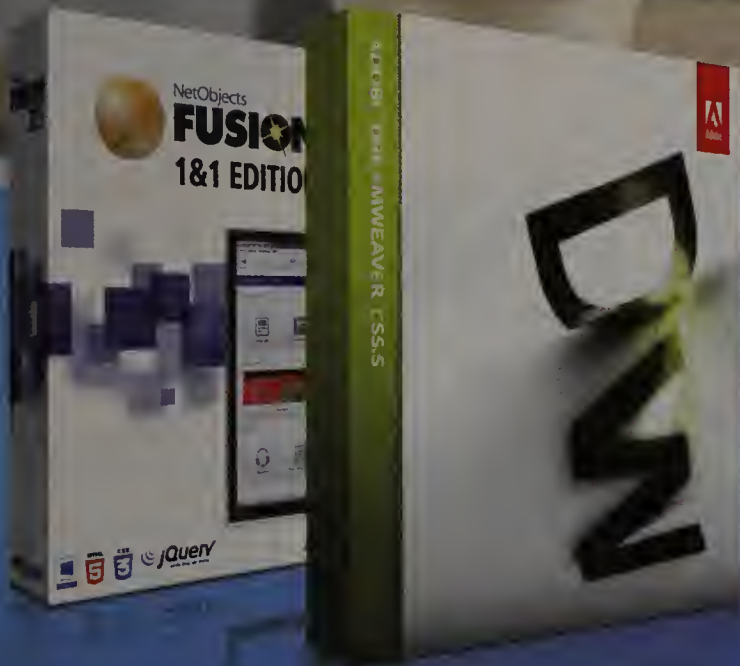
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1&1 Web Design Professional Daniel,
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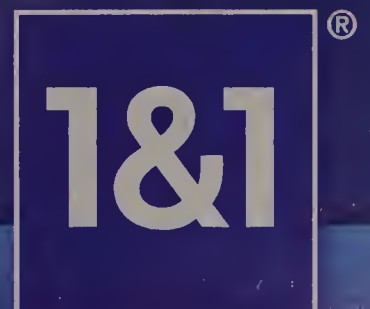


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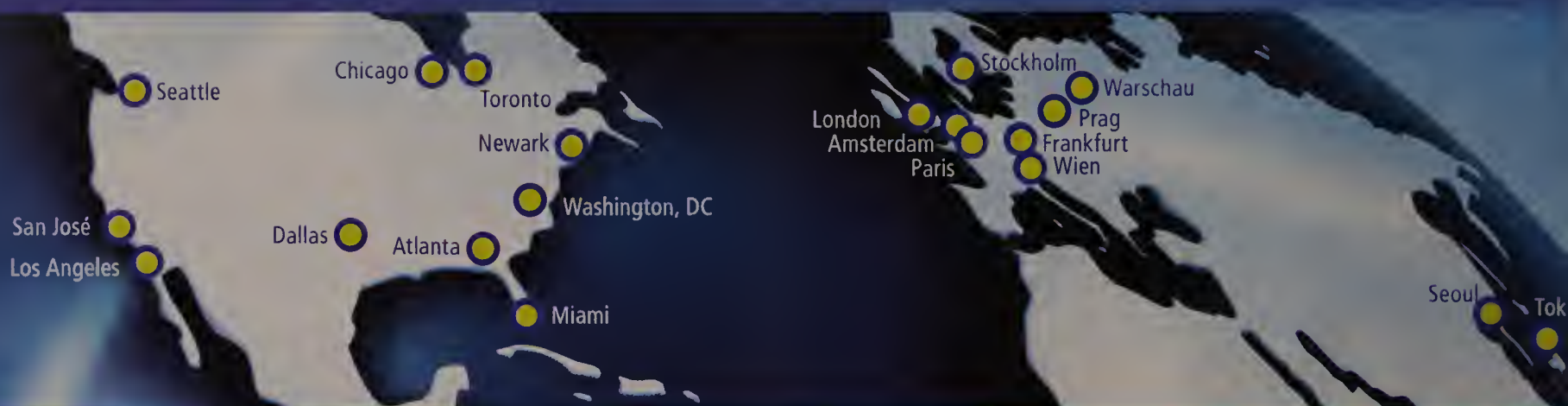
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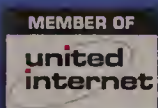
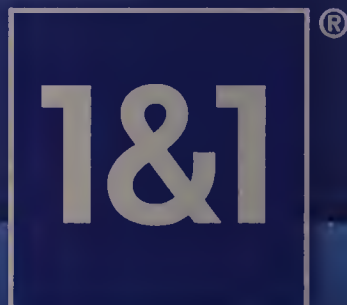
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PRODUCTIVITY

Actions

🔗🔗🔗; \$4; Usefool; getactionsapp.com

Actions isn't just a Mac app. Rather, it's a combination of a free Mac app—Actions Server—and the \$4 Actions app for iPad; together, they let you use your iPad to control your Mac and automate Mac tasks.

The Mac side of Actions is pretty bare-bones. Launch it, and its icon appears in your menu bar. The menu shows which iPad is connected and provides access to a few simple settings. Those preferences let you designate any folders, besides /Applications, in which Actions should look for apps (to make them available in the iOS app). You can also change the network port over which your Mac and iPad communicate.

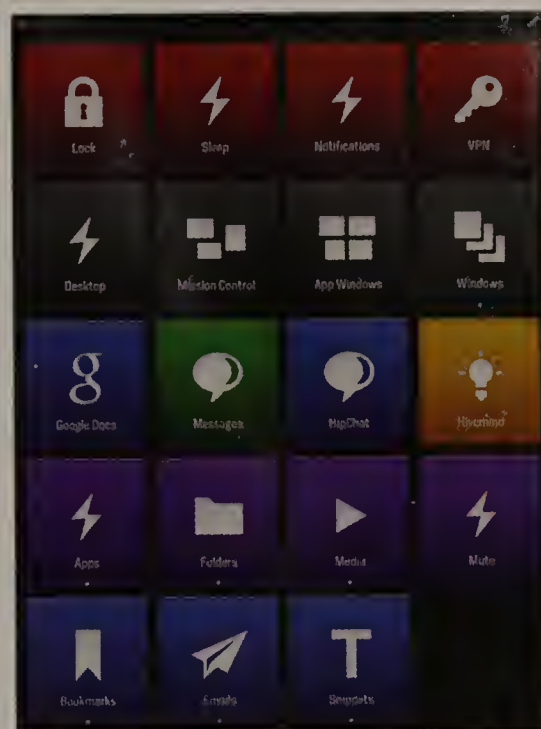
Otherwise, the real work happens in the iOS app. Launch that app on your iPad, and it searches your local network for Actions Server running on your Mac. You will be prompted to enter, on your Mac, the four-digit code that appears on your iPad. Once this initial setup process

is complete, your iOS device and Mac will connect automatically in the future.

The iPad app's main screen is a grid of large buttons, each with an icon, color, and text description. Each button is configured for a particular action on your Mac—just tap it, and its action is performed immediately. (Actions works in both portrait and landscape orientations.)

The app starts with a few example buttons, but every button is customizable: Tap the edit (pencil icon) button in the top-right corner to enter edit mode. In that mode, you can drag any existing button to move it, tap its X button to delete it, or tap the button itself to edit it. But the fun part is the Create/Load button. Tap *Create* to create your own action, or tap *Load* to add one of Actions' built-in actions, in lieu of creating your own.

Actions offers a clever way to get easier access to common tasks and actions. It makes your iPad feel like an



extension of your Mac. It's especially great for people who want macros but don't want to have to remember a bunch of keyboard shortcuts.—DAN FRAKES

PRODUCTIVITY

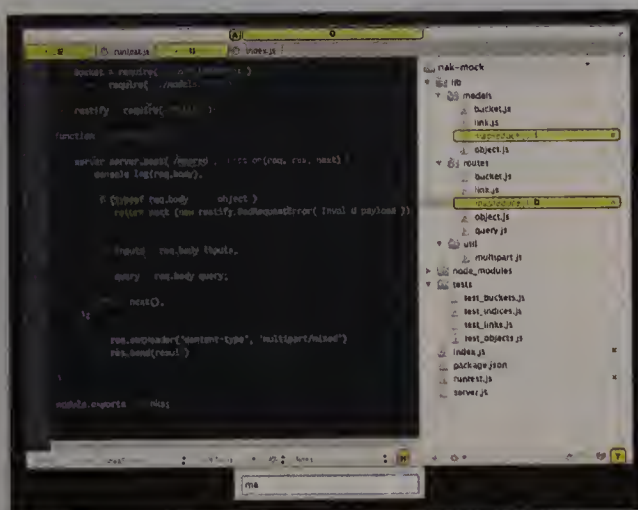
Promising Prospect: **Shortcut 0.4.3.1**

Free; Sproutcube; shortcutapp.com

Modern graphical-user interfaces make a mouse practically mandatory, but I employ one only when I have no other choice. A keyboard, unlike a mouse or trackpad, gives me haptic feedback that lets me type without looking.

Shortcut promises to let you use the keyboard for many operations, such as clicking textual links on a webpage, that normally would require a pointing device.

Shortcut adds a systemwide menu to your menu bar and allows you to choose a global keyboard shortcut. Press that shortcut, and Shortcut displays a small text-input box at the bottom of your screen. As you start typing in the box, the app examines the contents of the active window (which gains a faint outline to confirm which window



is being examined) and looks for actionable text items—buttons, checkboxes, files, and so on—that match the text you've typed.

Shortcut highlights the first matching item with a noticeable (yet unobtrusive) green, rounded rectangle; if that's the item you want to "click," you simply press *Return*. If an on-screen element requires a double-click, just press *Return* twice.

The app thus lets you bypass your mouse completely, as long as the item you wish to activate is visible and has some sort of textual form.

Shortcut is well worth a try. It could improve your productivity more than you might expect, and ease muscle strain.

The beta version of Shortcut is free; we don't yet know what the final version will cost.—MARCO TABINI

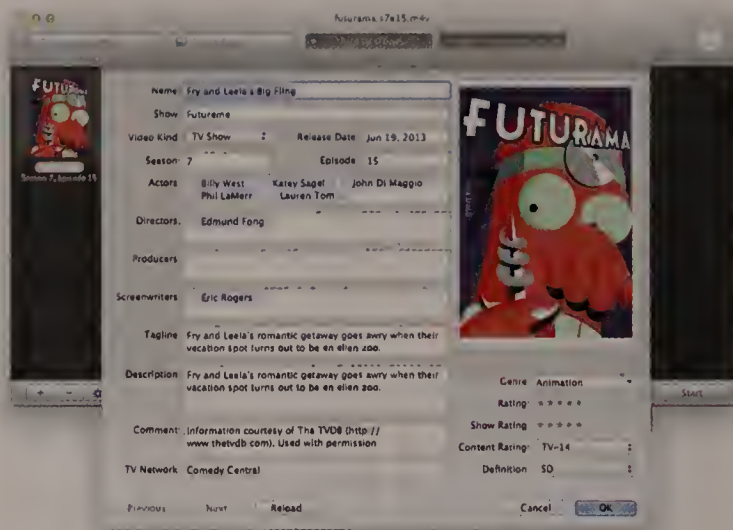
VIDEO

iFlicks 1.4

★★★★½; \$20; Jendrik Bertram; iflicksapp.com

Lots of apps can transcode video from one format to another, while others let you tag media files with useful metadata. But Jendrik Bertram's iFlicks does both, and I've found none better at combining the two tasks. It uses a clean, responsive, and very Mac-like interface that makes working with it intuitive and fun.

iFlicks can help you tag movies or TV shows you've ripped from your DVDs, recorded with an EyeTV-powered device, or downloaded from elsewhere—you can add artwork, genre, description, release date, episode titles and numbers, and more. iFlicks can also convert videos to smaller versions to save bits and bytes on space-crunched iOS devices, or to take files that iTunes can't understand and make them playable on your Apple TV.



iFlicks' Preset pop-up menu, where you choose the output format for files you plan to process using the utility, offers nine options: Reference File, iTunes Compatible, Universal, iPod, iPhone,

Apple TV, iPad, Apple TV 2, and New Apple TV & iPad. You can choose any preset as the default. The Destination pop-up menu lets you choose where iFlicks should save the resulting file.

One button, 'Move Original to Trash', gives you the option to move the original file to the Trash when iFlicks has finished encoding/tagging it. That's

safer than deleting the file outright.

If you do a lot of video-file tagging and conversion, you'll be hard-pressed to find another Mac app that performs these tasks as well as iFlicks.—JONATHAN SEFF



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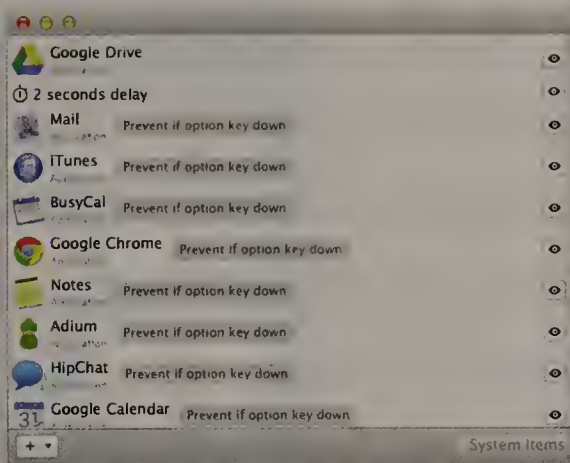
UTILITY

Startupzizer 2.2

☆☆☆☆; \$10; Gentle Bytes; gentlebytes.com

Gentle Bytes' Startupzizer is a utility that does one specific thing very well—in this case, managing your login items (those apps and processes that you've set to launch automatically or open every time you log in to your account on your Mac). Startupzizer gives you greater control than OS X does over exactly when and how those things launch.

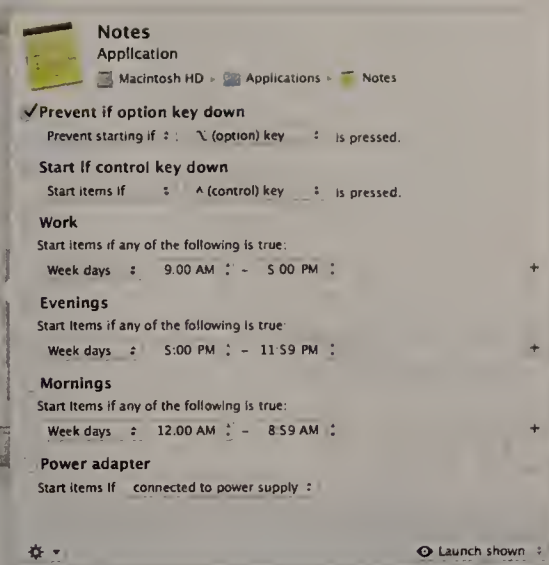
Startupzizer automatically detects any items (apps, files, menu-bar utilities) you already have in the official login-items list. You can then select which of those items Startupzizer should manage. If you later add new items to OS X's login-items list (for instance, by installing a new app and opting to have it launch at login), Startupzizer detects that addition and issues an alert; you can then choose to move the



new item to Startupzizer's list or to leave it in the System Preferences list.

Once an item is in the Startupzizer list, you define the conditions under which it should launch.

In short, Startupzizer offers the kind of control that can make your regular login



sequence a lot saner. I think it's a dandy little utility that has made my everyday computing life just a bit easier and more controlled.—DAN MILLER



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NOVEMBER 2013 • MACWORLD 39

iOS Central

The Latest on the iPhone, iPod Touch, iPad, and App Store

Apple: One iPhone Is Not Enough

Now there are two:
iPhone 5s and iPhone 5c.

BY MACWORLD STAFF



At Apple's September iPhone event, we managed to get our hands on both of the company's new smartphone models. Here are our first impressions.

iPhone 5s

When the iPhone 5s was only a rumor, much was made about the anticipated gold color option. But it turns out not to be some crazy, Vegas-style iPhone. Instead, it's a muted gold equivalent of the iPhone 5's silver. The gold iPhone 5s has a white front and a gold metallic finish on the sides and back. The new "space gray" iPhone is basically the old black iPhone, with the slate metal shade changed to a dark gray. (Space, by the way, is black—not gray—but maybe someone in Apple's brain trust objected to "matter gray.")

In briefly using the iPhone 5s, we found it speedy and snappy, and iOS 7 looks great. We couldn't run any benchmark tests or particularly hungry apps, so we had no way to evaluate Apple's claim that

the iPhone 5s is twice as fast as the iPhone 5 at handling many tasks. Overall, the iPhone 5s feels a lot like the iPhone 5. It is truly an iPhone with an s at the end at its name—a bunch of upgraded internals built on top of a familiar phone design.

The new Touch ID fingerprint sensor is built into the iPhone 5s's Home button, which feels ever-so-slightly different.

Configuring and using Touch ID is a breeze. In the Settings app, under 'Pass-code and Fingerprint', you can tap to add a new fingerprint. To do so, you must enter your device's passcode first. The upshot: Even if someone snags your unlocked iPhone, they can't simply add their own fingerprints to it willy-nilly; they need to know your passcode first.

Because the iPhone 5s can store five

fingerprints, you can have the phone memorize two of your own fingers—say, both thumbs or a thumb and an index finger—and still have room for prints from your significant other or your kids.

When you tap to add a new fingerprint, iOS 7 prompts you to tap your finger on the Home button several times. After a while it may also coach you to change your grip on the phone so that it can map a larger portion of the surface area of your fingertip—just as though you were getting fingerprinted at the police station. A fingerprint icon continues to add details as you tap, until finally the phone tells you that the process is complete.

You can name stored fingerprints—'My thumb' or 'Lauren's index', say—to keep track of which is which. And if you want

The iPhone 5s is truly an iPhone with an 's' at the end of its name—a bunch of upgraded internals built on top of a familiar phone design.

to edit a print's name, or delete it, figuring out which is which is easy when you're in the Touch ID portion of the Settings app: Just put your finger on the Home button, and you'll see the saved fingerprint linked to that finger briefly highlighted in the list.

After saving a fingerprint, you can use it for two purposes. One involves simply putting your finger on the Home button; after a moment, the device will unlock. If it can't identify your fingerprint, you'll see a Try Again message. After a few attempts, the iPhone will flip over to the passcode keypad, not-so-subtly encouraging you to give up and enter your passcode instead.

You can also use your fingerprint anywhere where you're prompted for your Apple ID password—specifically, for iTunes Store purchases. When you go to buy an app, for example, the iPhone 5s will prompt you to provide your fingerprint. But if you can't or don't want to, you can tap in your actual password instead.

iPhone 5c

At first blush, the iPhone 5c looks a bit like the offspring of the iPhone 5 and the plastic-backed iPhone 3GS. It's long and thin like the iPhone 5, but a hair bigger in every direction, and about 0.7 ounce heavier. It marks the first time that the iPhone has come in anything aside from black or white: You can pick up an iPhone 5c in pink, yellow, blue, green, or white—if you're a fan of black, you'll probably want to look to the iPhone 5s.

The polycarbonate shell is, of course, the most obvious change. It's crafted from a single piece of plastic, and—as Apple design maven Jonathan Ive said in a video played during the Apple media event introducing the phone—you won't find a single seam or joint in the unibody-style design. (The shell reminded us of nothing so much as the final edition of the white polycarbonate MacBook.)

The iPhone 5c feels good in the

hand: It has a nice, solid build, without seeming heavy. Though Apple bragged about the diamond-cut chamfers on the 5 and 5s, the iPhone 5c has curved edges that feel a little more comfortable to hold. Between the hard plastic case and the metal frame underneath it, the entire phone feels solid, and not at all cheap.

The volume buttons, the Ring/Silent switch, and the On/Off switch are made of colored plastic. In our admittedly brief hands-on time, they too seemed to have the high build quality you'd expect from Apple, with no looseness or wiggling. (Fun fact: Only one iPhone 5c doesn't show you an orange line when you flip the Ring/Silent switch to mute—the pink version, which instead displays a white line. The orange line likely lacked the contrast necessary to be useful on the salmon-hued model.)

The polycarbonate surface is grippy, and the colors are vibrant. A single piece of glass fronts the phone, just as on the iPhone 5 and 5s, and you get only a slight hint of the color when viewing the device from the front. If nothing else, that may prevent users in multi-iPhone households from picking up the wrong device.

Apple has heavily emphasized its new case for the iPhone 5c. Made from silicone, it has a soft microfiber interior, button overlays for the On/Off and

volume buttons, holes for the Ring/Silent switch, and more holes all over the back.

In our limited time using it, we weren't big fans of the case, for several reasons. The rear holes do the job of letting the color of the iPhone

5c underneath come through, so you can mix and match colors (say, a blue case with a bright green iPhone 5c showing through). But they also show a dismaying lack of attention to detail, allowing various bits of text imprinted on the rear of the iPhone to peek through in dopey ways. With an iPhone 5c case on, the iPhone's back looks as though it's imprinted with “non” or “hon”—the parts of the word *iPhone* that fit within the cutouts. The FCC-related text looks even worse in the glimpses that the holes afford.

We also noticed that the holes on the back collected a fair amount of dust and schmutz. Taking into account the ridges



Hues Calling Apple introduces a splash of color with the iPhone 5c, offering unibody plastic shells in green, blue, yellow, pink, or white.

of each cutout and the microfiber lining the case, the holes seemed like significant dirt attractors. We also noted that the cases seemed to hold (and thus show) more finger cleft than the polycarbonate iPhone 5c shells themselves did. That is, while the case felt like a dirt magnet, in our limited experience, the naked iPhone 5c units on display seemed much cleaner. Apple's press representatives frequently wipe down handheld devices at hands-on press gatherings like this one—but that cleaning process is usually limited to device touchscreens. At this event, the reps continually wiped down the iPhone 5c cases themselves as well.





Stay on Track The DailyMile Web-based app records your exercise accomplishments and invites support from friends.

weight-loss plans in the Naked City, and my friends recommended any number to me. Using the Kindle app on my iPad mini (go.macworld.com/kindleios), I perused several of the books before settling on a recent entry, *VB6: Eat Vegan Before 6:00 to Lose Weight and Restore Your Health...for Good* (go.macworld.com/vb6), by *New York Times* food writer Mark Bittman. His recommendations were similar in their basic outlook to those suggested in various other books

I checked out: Shift your emphasis away from eating meat and processed foods and toward a daily regimen consisting mostly of vegetables and whole grains.

Crucially, using the Kindle app to do my research saved me lots of money. In particular, it enabled me to peruse several competing options, instead of throwing a dart at the first diet plan that caught my eye. Bittman's book carries a list price of \$26; I was able to buy it for half that amount as an ebook from Amazon.

Measuring My Food

Bittman's plan doesn't require strict tracking of your food intake, but I started keeping a food diary to try to be thoughtful about what I was eating and when. When that turned out to be cumbersome, I turned instead to FitNow's Lose It app for iPhone (go.macworld.com/loseit).

I'd actually tried this app once before and had given up quickly—that was before I started reading and deciding

Use Your iOS Devices to Lose Weight and Get Fit

When Joel Mathis's doctor told him that he had to lose 50 pounds, Mathis turned to two indispensable tools—his iPhone and his iPad.

BY JOEL MATHIS

Lose 50 pounds, the doctor told me, and then we can start to talk about taking the kinds of steps that'll make you happy and healthy for the long term.

Maybe, he added, you should think about bariatric surgery.

I thought about it...for about 5 seconds. Then I rejected the idea. After a lifetime of poor and inconsistent eating and exercise habits, I'd arrived at age 40 desperately out of shape—a weight that measured (ahem) somewhere in the upper 200s—with some preliminary warning signs that the remainder of my life might be a) unpleasant and b) not all that lengthy if I didn't turn things around. No shortcuts out of that, I decided. It was time to revamp my entire lifestyle.

Two months later, I've made a good

start. I'm exercising more and eating better (and more consistently) than I have in years. And no surprise, my iPhone and iPad have accompanied me closely every step of the way. I'm told that once upon a time, in the distant past, people lost weight without the use of iOS devices—but for the life of me I don't know how they did it. I've found technology to be a crucial aid.

Learning How

The first step for me was to stop, think, and start to read about which approach might serve me best. There are a million

I'm told that once upon a time, in the distant past, people lost weight without the use of iOS devices—but for the life of me I don't know how they did it.



Get Loss Lose It gives you a calorie budget and lets you track your intake over the day.

how I wanted to eat—because Lose It works a lot like Weight Watchers: It gives you a daily calorie budget, set according to your weight-loss goals. If you start counting calories without changing how you eat, you'll hit that limit pretty quickly, and I often did. After reading Bittman, though, Lose It started to help me see that a plant-based diet helped me eat plenty during the day—enough not to be hungry—while leaving me lots of room under the calorie cap. My earlier, cheesesteak-based diet had done me no such favors.

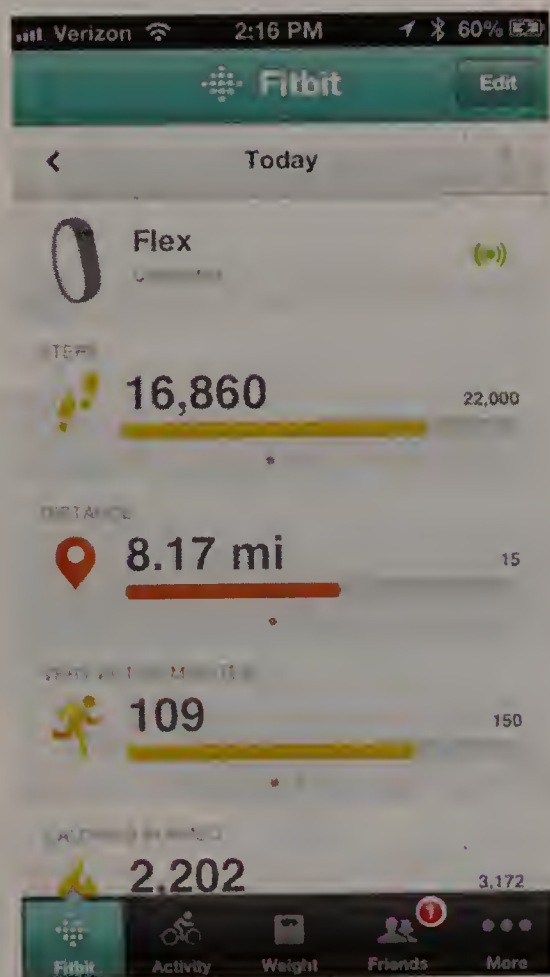
Tracking calories can be a bit of a drag, but Lose It makes it relatively easy, with calorie counts for thousands of food items (including menu items at hundreds of restaurants) and you can add many food items by using your phone to scan in the barcodes on their packaging. It's a little trickier if you are cooking foods from scratch, but the app is still pretty easy to use. MyFitnessPal.com, which has a host of iOS apps associated with it, offers a recipe nutrition calculator (go.macworld.com/recipecalc) that can do the calculations for you. And the best recipes? You can save those directly to the Pepperplate app (go.macworld.com/pepperplate), a sort of Instapaper for foodies.

Measuring My Activity

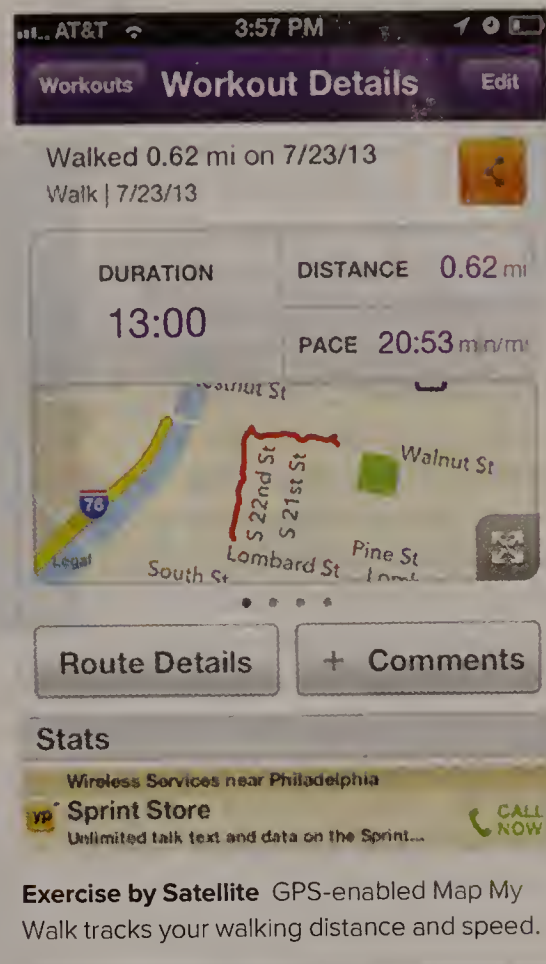
Simply tracking my intake wasn't enough. I once got into the best shape of my life through relentless exercise—but I did it without changing anything about my eating regimen. My metabolism has, in early middle age, slowed enough that I probably can't repeat that feat, but activity is an important component of a healthy lifestyle change regardless.

I've ended up using two apps to track my physical activity. For my visits to the gym, I use DailyMile.com, a Web-based app that, in its mobile version, has the look and feel of a native iOS app. I've saved it to my iPhone's home screen and log in my exercise right after I finish.

Since I live in one of the most walkable cities in the United States—Philadelphia—I quickly realized I should be skipping the bus and spending more time on foot. Several friends advised me to buy a Fitbit tracker to use in conjunction with its iOS app (go.macworld.com/fitbitios) so I could automatically track every step I take. But I skipped that in favor of using the free version of Map My Walk (go.macworld.com/mapmywalk), a GPS-enabled app



Step Up Fitbit takes tracking to a new level of granularity by recording every footstep you take.



Exercise by Satellite GPS-enabled Map My Walk tracks your walking distance and speed.

com/mapmywalk), a GPS-enabled app that maps your route and calculates your average speed on it. I turn it on every time I leave the house for a short stroll. And I've learned one great thing from it: I'm a speedier walker than I thought I was.

Keeping It Friendly

Because it's 2013, all of these apps have a social media component. Lose It, for one, is a self-contained universe—you can add friends who are also using the app. (I've periodically exported a spreadsheet of my progress, and post it to a blog for people to see.) Both DailyMile and Map My Walk have their own networks, and let you share information to Facebook and Twitter. That feature satisfied my craving for social feedback, which, in turn, helped me create a larger community of people who encourage me and occasionally challenge me to do better.

After two months, I've lost 10 pounds—short of my 50-pound goal, yes, but I'm just getting started. For the first time in my life, I feel like I have the power to control myself and to form good habits. My iPhone and iPad have been indispensable tools in the process. And I have only 40 pounds to go.

Let the Tastemade App Make You a Star of Food TV

If you love the culinary arts, the folks at Tastemade (go. macworld.com/tastemade) want to help you put your insights on the small screen.

Tastemade lets you create a TV show dedicated to your favorite restaurants. First you select an establishment through the built-in Foursquare-powered search; then you choose one of several video templates that the app provides.

From there, Tastemade helps you record your masterpiece, suggesting what to shoot and for how long. (Some fairly detailed guidelines apply.) Once you've captured your raw footage, the app edits it into a professional-quality clip, which runs about a minute long and has its own soundtrack and titles automatically provided.



TV Dinners Tastemade's professional templates simplify the process of creating high-quality food-centric video content.

The app's professionally designed templates enable just about anyone to produce excellent video material with a minimum of equipment and know-how.

Tastemade isn't geared toward run-of-

the-mill reviews of the Yelp or Google variety. Instead, the app aims to help serious food enthusiasts showcase restaurants they love to patronize—and talk about.

Of course, users could try to game the system by recording materials that don't fit the app's mold; but the company works to ensure that only those who play fair reach a broad audience. And even if you don't get featured by Tastemade, you can still share your episodes with your friends.

The Tastemade app makes generating good content easy and free—a savory combination for users who have the talent to be excellent food critics, but lack access to the massive resources of a TV network.—MARCO TABINI

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\$2 from the sale of the \$2.99 reusable bag will benefit The Safeway Foundation to fund breast cancer research. Stand Up To Cancer is a program of the Entertainment Industry Foundation, a 501(c)(3) non-profit organization.

Apple Acquires Wireless Chip Maker to Beef Up Its Bluetooth Capabilities

In August, Apple snapped up Passif Semiconductor, a maker of low-energy computer chips. The deal underscores Apple's interest in controlling key technologies—such as wireless tech—that go into its products.

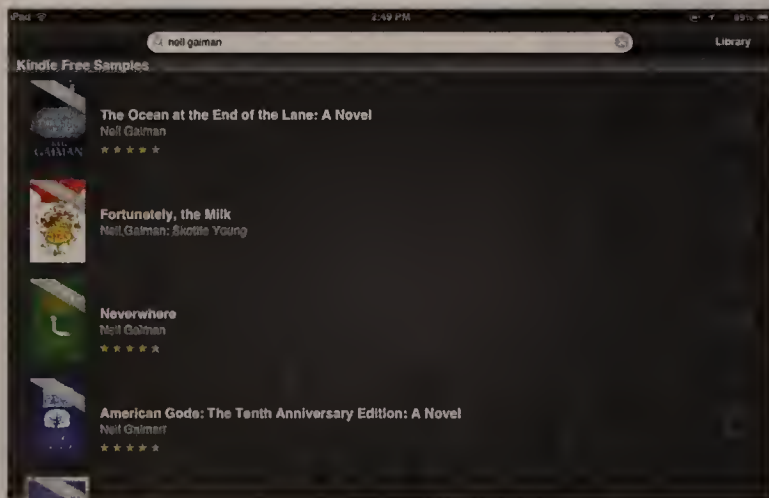
Connectivity between devices will become even more important with the rise of Bluetooth LE (low energy), which targets low-power devices such as those used for fitness, security, and healthcare. More and more, Apple's mobile products are interacting with smartwatches, fitness devices, and the like. The forthcoming iOS 7 is expected to include iBeacons, a technology that allows devices to collect data such as location via Bluetooth LE.

And users may soon be able to use Bluetooth to configure their Apple TV.

The low-energy part of the spec is crucial, as Bluetooth iPhone accessories are notoriously demanding on battery life. With control over both hardware and software, Apple may be able to coax better performance out of such applications. Also, a power-efficient Bluetooth LE chip would be essential to a smartwatch.

Passif's acquisition may not be the last for Apple in the near term. At the D11 conference in May, CEO Tim Cook noted that Apple had already acquired nine companies in 2013, and that it was still shopping for talent. See page 20 for more on Apple's recent acquisitions.—DAN MOREN

Kindle iOS App's Samples Sidestep Apple's App Store Purchase Rules



Amazon's Kindle iOS app (go.macworld.com/kindleiosrev) is great for reading, but it doesn't let you search for or buy books directly from Amazon. The fault lies with Apple's rule: Anything sold in the App Store must render unto Apple a 30 percent cut.

For most ebooks at its store, Amazon allows you to download a free sample and then buy the full version if you decide you want it. Because the samples are free, they're not subject to Apple's 30 percent rule. Now Amazon has added the ability

own library; now the results also list Kindle Free Samples that match the search terms.

Granted, you still have to venture into a Web browser to buy the full book, but it's a clever solution to the problem posed by Apple's in-app purchase policy—and it may be the best option for Amazon. The Kindle update may go some ways toward easing consumers' pain and frustration.

Still, I miss having a button in the Kindle app to take me straight to Amazon—and its absence hasn't driven me to buy titles only from the iBookstore.—DAN MOREN

Literary Tastes When you finish reading one book, you can download another free sample by that author.

to search for and download free samples inside its Kindle iOS app: Tap the magnifying-glass icon and enter a name or a title. Earlier versions of the app gave search results only from your

What's New at the App Store



Efexi

Do your vacation videos suffer from a lack of dragons? Efexio (go.macworld.com/efexio)—which sounds like a Harry Potter spell—offers “Hollywood-style” effects to add to videos on the iPhone and iPad. The app is free, as are a couple of the effects, but users must pay \$2 apiece for effects like “Zombie Walk” and “T-Rex Attack.”—JOEL MATHIS



Work Market

Experts say that, increasingly, freelance work drives the economy. Work Market (go.macworld.com/workmarket) is a free iOS app that lets workers connect with employers for short-term gigs, negotiate terms, and accept work. Users post work profiles through the app, and then employ it to manage their workflow remotely—checking in and out, messaging, and more.—JOEL MATHIS



Djay 2

Algoriddim's \$5 Djay 2 for iPad (go.macworld.com/djay2) has a new user interface that lets you rotate your iPad to serve as a single sound deck with large controls. HD waveforms, a new sampler and drum pads, an improved music library view, and updated syncing and looping tools help you keep the party hoppin' all night long.—JOEL MATHIS



Zagat

The free Zagat iPhone app (go.macworld.com/zagat) offers guides to the best eateries in Austin, Boston, Chicago, London, Los Angeles, New York, Philadelphia, San Francisco, and Washington, D.C., with more to come soon. You can make reservations through the app, and you can spend your free time reading articles and watching videos of the best meals you haven't yet been able to eat.—JOEL MATHIS

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App Guide

Software for Your iPhone, iPod Touch, and iPad


StoryPress for iPad

PRODUCTIVITY If you've ever wanted to craft your own biography—or to collect your parents' or grandparents' stories—GhostGear Labs' free StoryPress (go.macworld.com/storypress) is the place to start. It helps you record oral histories that sound nearly as polished and professional as the StoryCorps pieces that run on NPR.

After logging in to StoryPress with an email address or your Facebook account, you enter your name and the year of your birth, and then create a cover for your first book. The cover includes the title, an icon from a list provided by StoryPress, and a photo from your iPad library.

Next you select a method to record your tale. Select Dictation if you know the story you want to tell—just tap a button in the app and start recording while you talk. Most of us, though, will opt for Interview Me, which gives you a choice of more than a dozen categories, each featuring an interview template of ten or more questions.

Once done, you upload the finished book to StoryPress.com, choosing to do so either in private or public mode. StoryPress is easy to use and provides crystal clear recording, but it would be better if users could add more photos of an event being described, and record video interviews.—JOEL MATHIS

iPad | ; Free; GhostGear Labs



APP GEMS

Get Social

iOS 7 and OS X Mavericks will offer integration with these popular social networking services, among others.



Facebook (go.macworld.com/fbios).



Flickr (go.macworld.com/flickr2).



Twitter (go.macworld.com/twitterphone).



LinkedIn (go.macworld.com/linkediniphone).

Field Trip for iOS

LIFESTYLE The primary goal of Google's Field Trip (go.macworld.com/fieldtrip) is to guide you to cool places to eat and fun things to do in unfamiliar cities.

You click a topic in a Field Trip category (Architecture, Historic Places, Lifestyle, Offers & Deals, Food & Drinks, Cool & Unique, or Art & Museums) and choose which online services Google should use to generate recommendations.

The best way to use the app is with headphones or a Bluetooth speaker connection. When you pass an item of interest, the app pushes a notification to you and tells you what makes that spot special. It's like having a digital tour guide at your side.

Field Trip is a bit buggy, but it's a useful guide in an unfamiliar city.—JOEL MATHIS

iPhone | ; Free; Google





The Other Brothers for iOS

GAMES 3D Attack Interactive's *The Other Brothers* (go.macworld.com/other) is a love letter to the Super Mario Brothers series and

to other iconic platformers. It's also a great, challenging platformer in its own right.

Mechanics Joe and Jim witness the kidnapping of a woman, and decide to give chase. Your enemies are gun-wielding Mafia hit men, police officers, rabid dogs, and environmental hazards, which add a bit of grittiness to the game. You'll swim, explore sewers, throw wrenches, and use the various light sources to see your foes.

My chief complaint is that the cramped level design and short missions result in frenetic pacing. You never have time to take a breath and plan your next move, as a boulder may come hurtling out of the darkness at any moment.—CHRIS HOLT

iPhone/iPad/iPod touch | ; \$2; 3D Attack Interactive

Tamagotchi L.i.f.e. for iOS

GAMES Relive the joy of having to feed, play with, and bathe a tiny pixelated alien who will eventually grow into a whiny adult with a bad attitude—because, let's face it, you didn't take very good care of it—with *Tamagotchi L.i.f.e.* for iOS (go.macworld.com/tamagotchi).

If you ever owned a Tamagotchi, this app will take you back to an era of your life when responding to the endless demands of a helpless virtual creature seemed diverting. But if you are asking yourself "Tamagotchi...what?" *Tamagotchi L.i.f.e.* probably won't win your heart with its constant push notifications and needy gameplay.—SARAH JACOBSSON PUREWAL

iPhone/iPad/iPod touch | ; Free; Namco Bandai



iBank for iPad

UTILITY Most iOS-based financial apps either aggregate Web-based data or work as display tools for information you track via a desktop app. Though *iBank for iPad* (go.macworld.com/ibankipad) used to be the latter type of app, requiring *iBank for the Mac* (go.macworld.com/ibankmac) to be truly useful, it can now handle all of your budgeting, banking, and investment needs on its own.

Whether you download transactions directly or enter them yourself, editing and categorizing transactions with *iBank for iPad* is a snap. Double-tapping any transaction reveals a small menu that offers options for editing, categorizing, or deleting the transaction.—JEFFERY BATTERSBY

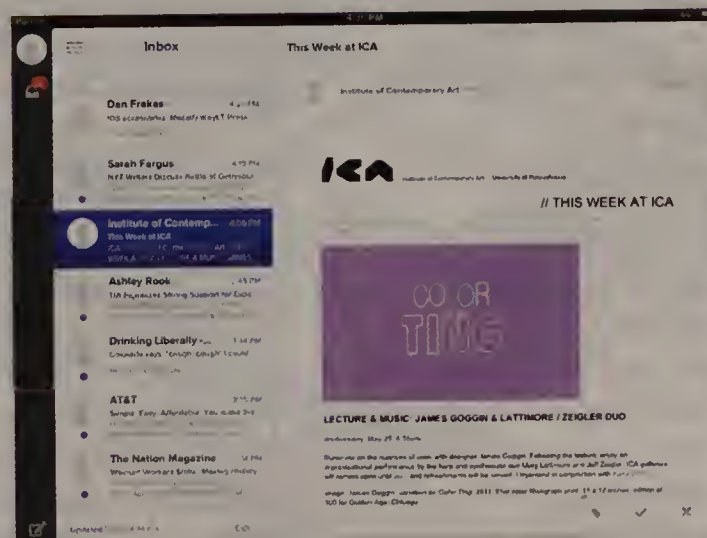
iPad | ; \$15; IGG Software

Evomail for iPad

EMAIL A new email application for Gmail users, *Evomail* (go.macworld.com/evomail) has a couple of features that Gmail lacks, including gesture capabilities. Swipe an email from right to left, and you can release a reply to the original sender; pull a little further to reply to everyone in a list of recipients. You can share email messages via Facebook, Twitter, or SMS; *Evomail* color-codes any custom-created submail boxes in Gmail.

Are those differences enough to justify the \$3 difference between *Evomail* and the free Gmail for iOS? Not to me—since I'm unlikely to use the available gestures or social media options (except the color-coded folders)—but your mileage may vary. Though *Evomail* is competent, it doesn't stand out from the crowd of competing email apps.—JOEL MATHIS

iPad | ; \$3; Jonathan George



Reviews

Accessories and Add-ons for Your iOS Devices

Hardware

Belkin Grip Power Battery Case

; \$100; Belkin; belkin.com



Packing a 2000mAh battery, the Grip Power Battery Case consists of a main battery portion that plugs into your iPhone 5 and a thin frame that snaps around the front. The attractive backing plastic on the case felt a little cheap in my hand.

The Grip Power intentionally protrudes beyond the screen, for a bit of extra protection if you ever drop the phone and it lands screen-side down. The Micro-USB port is on the side of the case, which works fine.

Instead of a little groove for you to use in prying apart and removing the case, a tiny tab protrudes from the unit's right side. This is the case's best feature—it's easy to grip, and it makes shucking off the shell a cinch.—LEX FRIEDMAN



Belkin Chambray Tab Cover

; \$30; Belkin; belkin.com

A two-tone folio case for the iPad mini, Belkin's Chambray Tab Cover is available in blue, pink, khaki, or dark gray, with chambray (plain woven cotton) fabric, a dark gray faux-leather binding, and a dark gray faux-leather magnetic tab closure.

Inside, the Tab Cover's four faux-leather corners hold the mini securely in place, and a soft gray lining rests against the screen. The Tab Cover is both a cover and a stand.

Three small notches on the front cover's interior secure the cover at set angles; the grippy inner material lets you position the mini at many other angles as well.

The Tab Cover's corners make popping your mini in and out of the case easy, and the case gives you access to most of the mini's ports and buttons, and to the mini's mute switch.

—SARAH JACOBSSON PUREWAL



Mophie Powerstand

; \$150; Mophie; mophie.com

Made primarily of aluminum, with soft-rubber pads wherever it comes into contact with your iPad, Mophie's Powerstand adjusts to angles from horizontal to upright, to landscape and portrait orientation, and in height by several inches.

You can use the sturdy and stable Powerstand with an external keyboard, but its hinge supports on-screen typing, too. A 30-pin dock connector in its cradle complements a USB port in its base, so you can charge and sync your iPad in the stand. (A different version of the stand works with Lightning-connector iPads.) Its USB cable can plug into your Mac or into the included AC charger, but it doesn't have its own battery.—KAREN FREEMAN



Rokform Rokshield V3

; \$39; Rokform; rokform.com

Available in seven two-toned color varieties, Rokform's RokShield V3 case for the iPhone 5 has a tough two-piece exterior and screen protectors to guard your iPhone 5 against bumps, falls, and scratches.

The RokShield V3 has a

polycarbonate interior and is surrounded by a removable rubber bumper that guards the phone's sides and corners.

With both pieces of the case in place, my iPhone felt well protected without being bulky.

The case comes with a magnet for mounting your iPhone to a metal surface, such as a bicycle or a fridge. In my tests, the magnet felt strong enough to hold an iPhone without risk of letting it fall.—SARAH MITROFF

iOS Devices: Current Lineup

PRODUCT	SPECS	RATING	PRICE ¹	DISPLAY	MORE INFO
 iPad 2	16GB	Wi-Fi	Wi-Fi: \$499; Wi-Fi and cellular: \$629	9.7-inch color (Retina)	go.macworld.com/ipad4
	32GB	Wi-Fi, 	Wi-Fi: \$599; Wi-Fi and cellular: \$729	9.7-inch color (Retina)	go.macworld.com/ipad4
	64GB	Wi-Fi, 	Wi-Fi: \$699; Wi-Fi and cellular: \$829	9.7-inch color (Retina)	go.macworld.com/ipad4
	128GB	n/a	Wi-Fi: \$799; Wi-Fi and cellular: \$929	9.7-inch color (Retina)	go.macworld.com/ipad4
	16GB (iPad 2)		Wi-Fi: \$399; Wi-Fi and cellular: \$529	9.7-inch color	go.macworld.com/ipad2
 iPad Mini	16GB	Wi-Fi, 	Wi-Fi: \$329; Wi-Fi and cellular: \$459	7.9-inch color	go.macworld.com/ipadmini
	32GB	Wi-Fi, 	Wi-Fi: \$429; Wi-Fi and cellular: \$559	7.9-inch color	go.macworld.com/ipadmini
	64GB	Wi-Fi, 	Wi-Fi: \$529; Wi-Fi and cellular: \$659	7.9-inch color	go.macworld.com/ipadmini
 iPhone 4, 4s, 5c, and 5s	8GB 4s ³		Free	3.5-inch color (Retina)	go.macworld.com/iphone4
	16GB 5c ⁴	n/a	\$99	4-inch color (Retina)	n/a
	32GB 5c ⁴	n/a	\$199	4-inch color (Retina)	n/a
	16GB 5s ⁴	n/a	\$199	4-inch color (Retina)	n/a
	32GB 5s ⁴	n/a	\$299	4-inch color (Retina)	n/a
	64GB 5s ⁴	n/a	\$399	4-inch color (Retina)	n/a
 iPod Touch 5th Generation	16GB		\$229	4-inch color (Retina)	go.macworld.com/touch516
	32GB		\$299	4-inch color (Retina)	go.macworld.com/touch5
	64GB		\$399	4-inch color (Retina)	go.macworld.com/touch5

n/a = Not available. ¹All prices are Apple's prices. ²Separate Wi-Fi-and-cellular iPad models are available for AT&T's network and for Verizon's. ³This phone is available only with an AT&T plan. ⁴These models are available with an AT&T, Sprint, or Verizon plan.



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Apple

by the Numbers

ILLUSTRATIONS BY TAYLOR CALLERY

Keeping track of how Apple is doing as a company is hard. The stock price goes up, the stock price goes down—often without any apparent reason. We hear one set of market-share numbers for smartphones, tablets, and computers one day, and an entirely different set the next. Apple is doing great, says one group of analysts, while another says Apple is doomed. So how is Apple doing, really?

To get some sense of the company's health, we asked four writers to dig into four different sets of numbers: the ones that Apple itself publishes every quarter, as part of its required financial reporting, regarding the sales of its four principal product lines—Macs, iPhones, iPads, and (yes, still) iPods. We asked those writers to look at those numbers over as long a period as they could, to see if they could extract some long-term signals from those short-term trends.

The bottom line: Apple is doing just fine, thanks, but it is also facing some very definite—and very dangerous—threats in each of those four product lines. Those threats make this period—the fall and winter of 2013, when the company will announce and ship new products in at least three of its lines—one of the most crucial in the company's history.

How well is
the company
doing, really?



THE MAC

by the Numbers

BY IAN PAUL

The PC market as a whole may be shrinking, but one segment of the market that isn't declining is the Mac. Even as the Mac makes up an ever-diminishing portion of Apple's overall revenues, the Mac's popularity has grown by leaps and bounds in the last decade.

Mac Shipments Up

In 2003, Apple shipped just more than 3 million Macs worldwide, the majority of which were desktop PCs. At the time, the Mac was the largest contributor to Apple's bottom line, accounting for more than 72 percent of Apple revenue. Jump ahead to Apple's 2012 financial year: The company sold more than 18 million Macs, and yet those Mac sales amounted to less than 15 percent of Apple's bottom line.

How does that happen? The most significant shift in Apple's business over the last decade, of course, was the

advent of its mobile operating system—iOS—and its related devices. Beginning with the release of the original iPhone

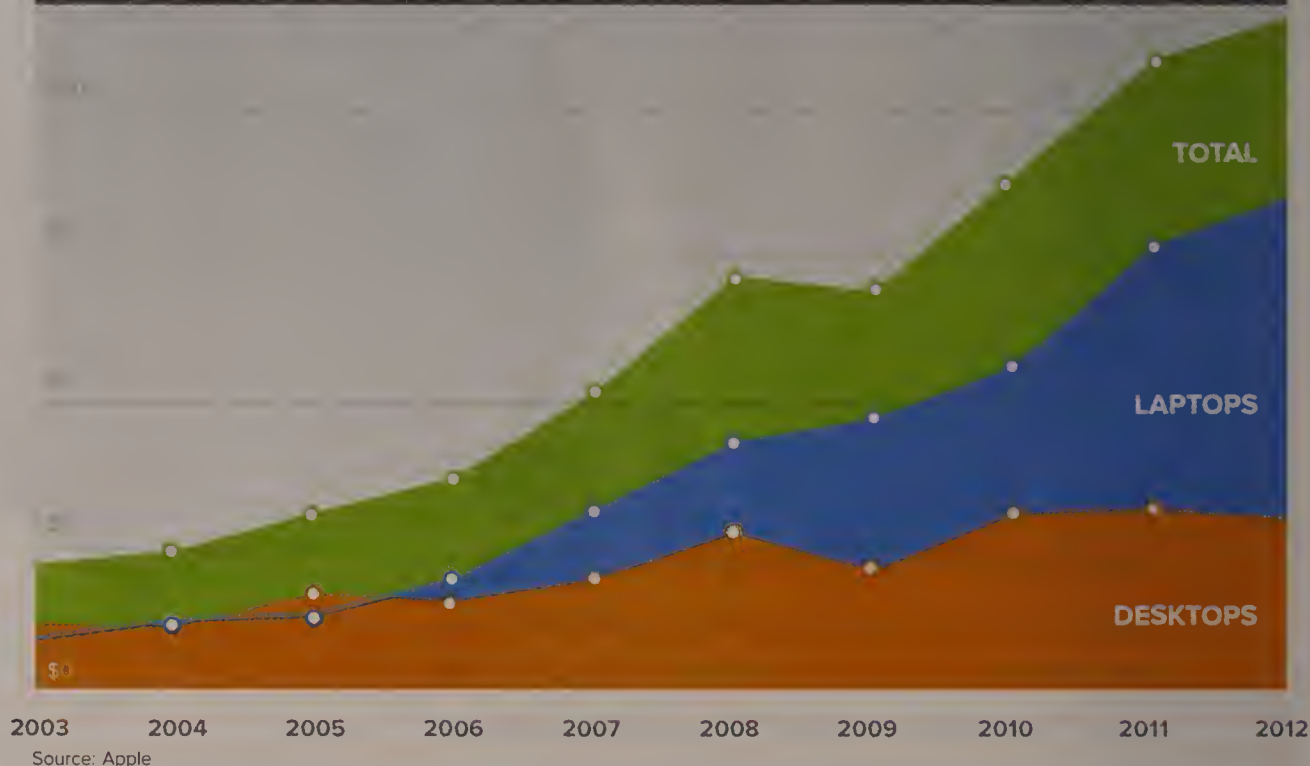
in 2007, followed by the iPad three years later, Apple set off a tectonic shift in personal computing—a change that is still wreaking havoc on the entire PC market, as well as on Apple itself.

Because many of us are now equipped with smartphones and tablets, we have less need for PCs in 2013 than we did even five years ago. Analysts and critics still debate whether mobile devices have outright decimated the PC market or have just delayed purchases of PC replacements by a few years.

The market impact of iOS aside, the Mac has unquestionably increased in popularity compared with other, non-Apple computers. Between 2009 and 2010, the number of Macs sold rose by more than 31 percent. The following year, Apple recorded nearly 22.5 percent growth for its computer business. That continued success is

MAC NET SALES

Net Revenue—Sales Minus Returns—in \$billions



owing to three reasons.

First, Apple's own retail stores gave the company more direct communication with Mac buyers and let them get hands-on time with the company's products. "Direct retail is one of the big success factors for Apple," says Mika-ko Kitagawa, principal research analyst for market research firm Gartner.

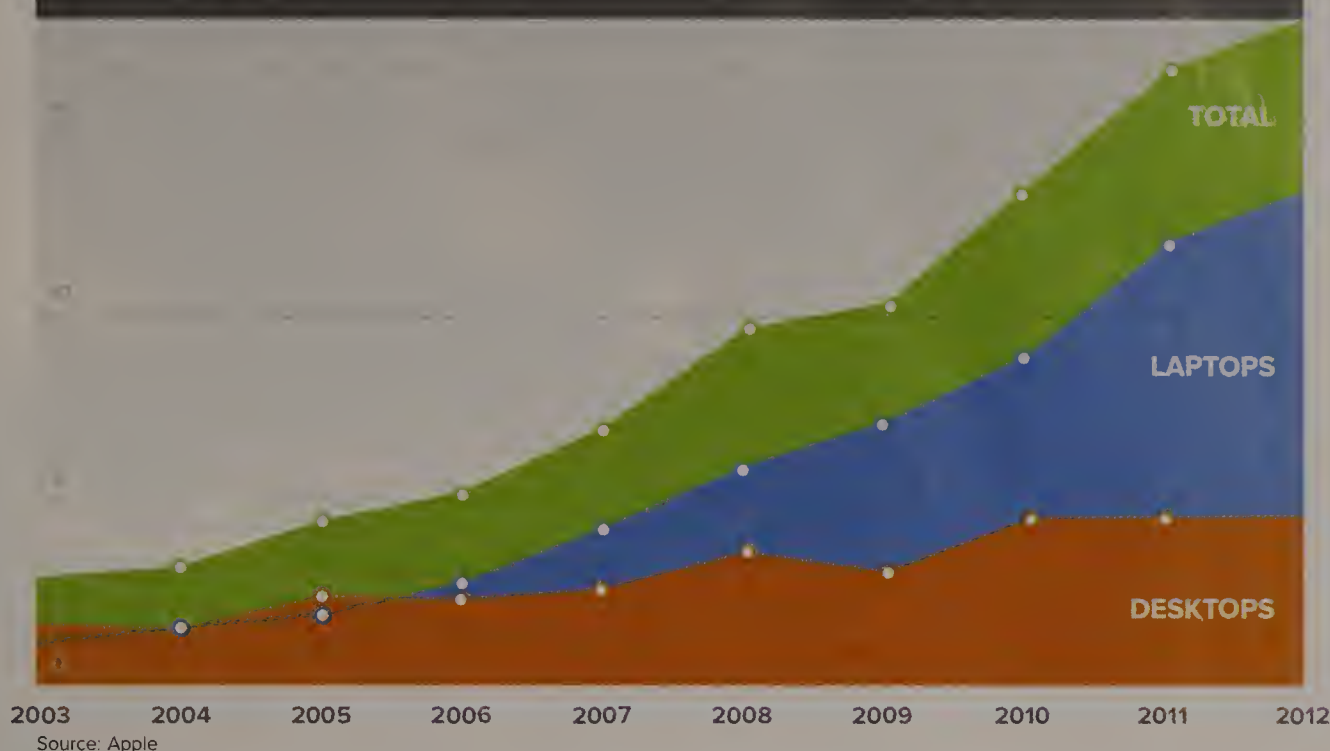
Second, Apple made the decision in 2006 to switch from using PowerPC processors to using Intel chips, a change in CPUs that gave the Mac's performance a leg up. "There was no comparison between PowerPC and Intel at the time," said Patrick Moorhead, principal analyst with Moor Insights & Strategy. "[Intel] was more powerful, it was more power efficient, and it also scaled from the low end with notebooks to the high end with workstations and the pro market."

The third reason for the Mac's continued ability to thrive is that in the same year that Apple switched to Intel processors, demand for notebooks began to regularly exceed sales of desktop machines for the first time. Soon after, Apple introduced the MacBook Air, a laptop designed for the mobile era. Initial Air models were criticized for being slow and lacking ports, but they were slim, light, and beautifully designed, and that's what seemed to matter for the mobile market.

Design touches first seen in the MacBook Air filtered through the rest of the Mac product line. Other MacBook models were soon sporting Air-like components such as solid-state drives, sealed

MACS UNITS SHIPPED

Number of Macs Sold (in millions)



batteries, and unibody designs. These same features have now filtered through to the rest of the PC industry.

Macs Now a Smaller Slice of Apple's Pie

A decade ago, Apple's share of the PC market was small—

around 2 percent of all desktops and laptops worldwide.

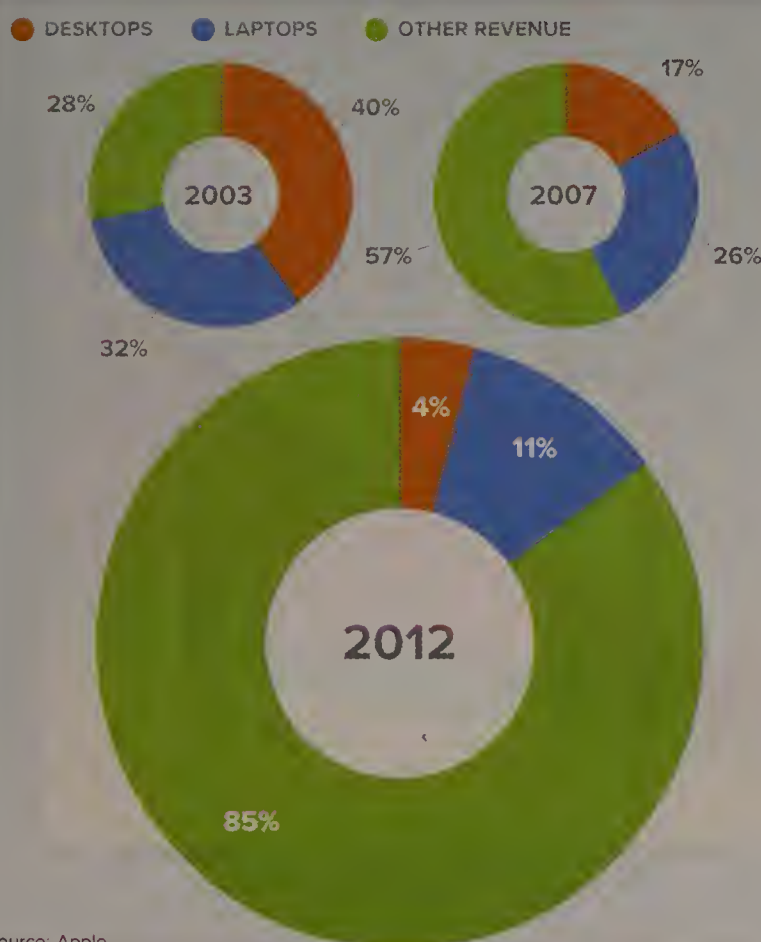
"In 2003, [the PC industry] really was all about desktops," Moorhead says. "It was still a pretty big period of growth, particularly in the emerging regions that weren't really able to ever afford a Mac."

In more-established markets, says Moorhead, consumers were becoming fascinated with Apple's industrial design and with the benefits that OS X offered such as easy-to-use video and photo management. But Apple's higher prices compared with what you could buy on the Windows side meant that Apple's primary consumers were those willing to pay a premium for the Apple experience.

As recently as 2006, Apple's market share was still hovering around 2 percent. But by the end of 2012 the Mac's popularity had more than doubled to about 5 percent of worldwide desktop and laptop shipments.

MAC SALES

As a Percent of Apple's Total Revenue



Apple's evolution as a company, its industrial-design aesthetic, and the ability of products like the iPod and iOS devices to draw new users to the platform—all helped to push the Mac's growth as well.

But at the same time that the Mac was becoming more popular, the overall appeal of personal computers would begin to wane. The rise of tablets, especially the iPad, would help precipitate a dramatic decline in worldwide PC demand.

Tablet shipments surged from zero in 2009 to more than 100 million by 2012, thanks to tablets' ease of use, faster response times, greater

portability, and sub-\$500 prices compared with PCs.

PC shipments, meanwhile, have steadily declined quarter after quarter. Gartner reported in July that the PC industry was in the longest slump ever seen, and it's not clear when—or even whether—things might turn around.

Looking Ahead

Mac sales appear set to continue increasing, although perhaps more slowly than in recent years.

"We think that Mac share will grow gradually, but continue to be small," says Gartner's Kitagawa. A PC market in retreat, combined

with Apple's minimum-\$1000 price tag, will keep the Mac beyond the reach of mass-market buyers who aren't willing to pony up that much for a computer.

Whether or not the Mac's popularity exceeds current expectations, MacBooks and iMacs still have an important role to play in Apple's overall business.

Along with Samsung and Lenovo, Apple is at the forefront of the so-called post-PC era. Instead of desktop or laptop computers handling each and every computing task, smartphones, tablets, laptops, and PCs are playing complementary roles in our everyday

lives. Each device now suits specific situations, from crunching massive spreadsheets at the office to catching up on reading into the wee hours before bedtime.

Looking into the more-distant future, it's anybody's guess as to what's in store for Apple's desktops and laptops. Will the Mac and iPad remain separate, or will the two converge into one device?

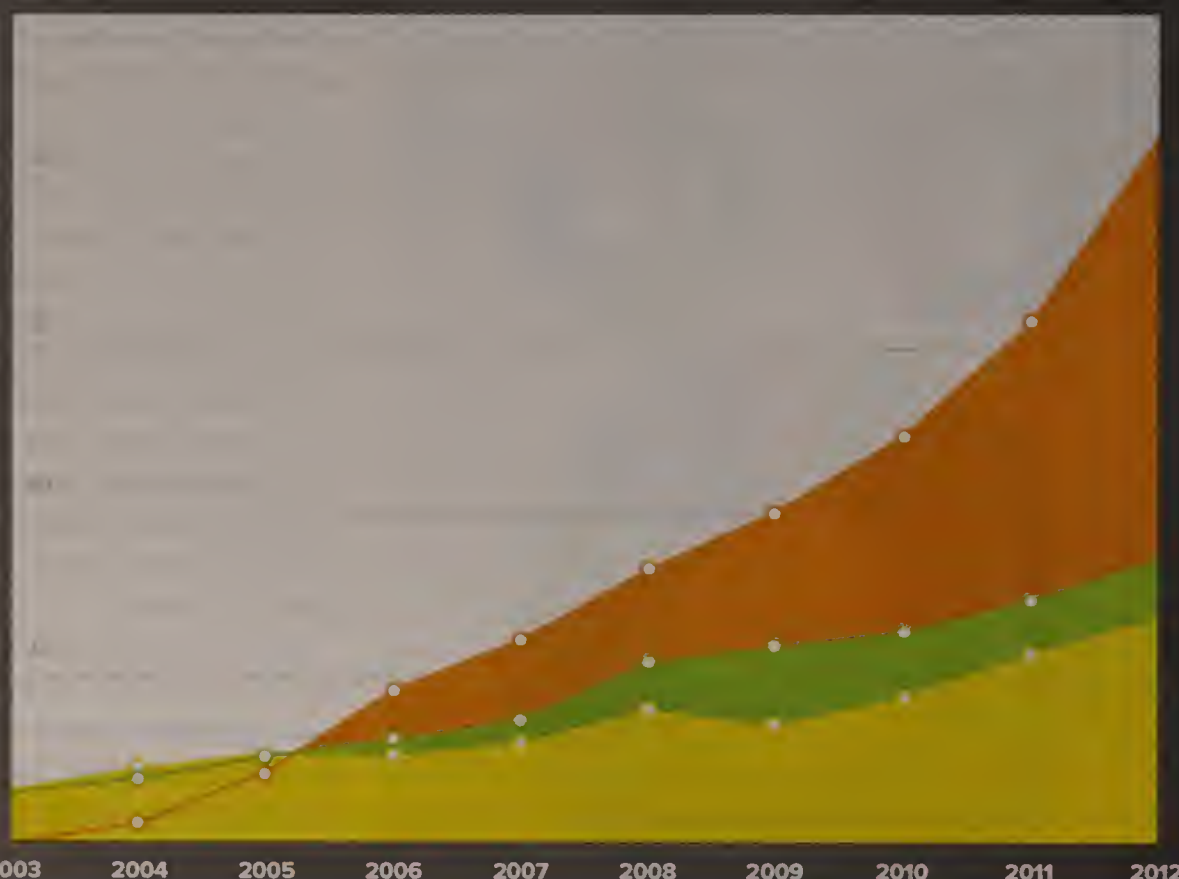
Anything's possible, but given Microsoft's struggle to realize its vision of a world of tablets, laptops, and desktops all running Windows 8, Apple's steady approach to the Mac's evolution seems like the right course.

APPLE'S NON-MAC, NON-iOS SALES ALSO RISE

Apple still makes money—more and more each year—from software, music sales, and other revenue streams. Nevertheless, those non-Mac, non-iOS streams are a smaller and smaller part of Apple's business.

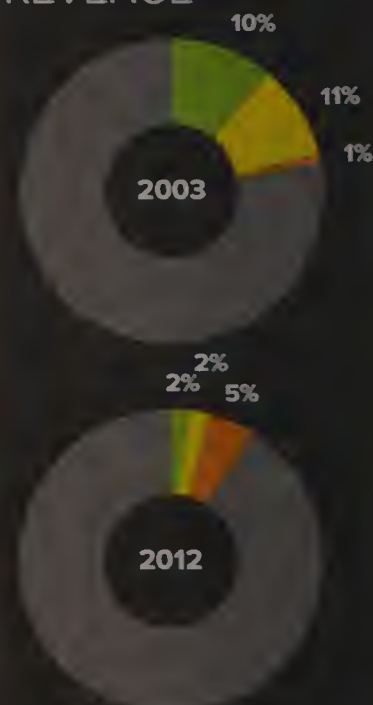
● OTHER MUSIC-RELATED PRODUCTS, SERVICES ● SOFTWARE, SERVICES, OTHER SALES ● PERIPHERALS, OTHER HARDWARE

NET SALES, OTHER PRODUCT LINES (IN \$BILLIONS)



Source: Apple

OTHER PRODUCTS AS PERCENT OF APPLE REVENUE



Cooler Master

www.coolermaster-usa.com



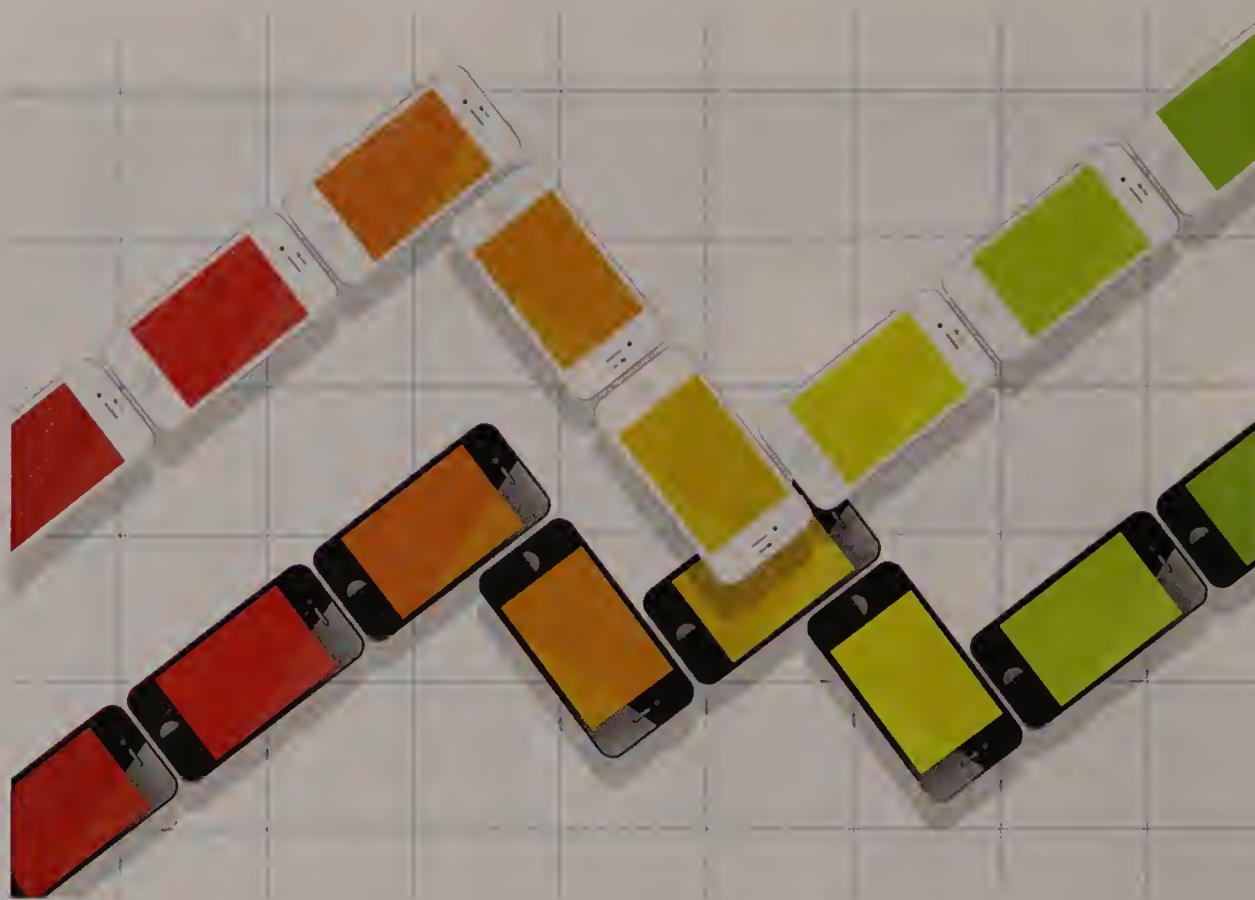
JAS Mini

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THE iPhone

by the Numbers

BY DAN MOREN

The iPhone is not only Apple's most prominent and iconic product at present, it's also the most important to the company's bottom line. But that significance also means that competitors have painted a big bull's-eye on the iPhone's back—and uneasy lies the head that wears the crown.

The Apple of Apple's Eye

Right now, no arena is more contentious for Apple—with more and more competition—than the smartphone market. Although the company isn't yet in the position of living or dying by the iPhone's sales figures,

it's impossible to dispute that the iPhone is the crown jewel of Apple's product line.

In 2012, Apple sold 125 million iPhones, which accounted for more than half of the company's revenue that year. Were the bottom to fall out of the smartphone market tomorrow, Apple wouldn't necessarily be ruined, but neither would the situation be copacetic. So, it's hardly surprising that iPhone sales are the subject of intense scrutiny from analysts, tech pundits, and even rank-and-file consumers.

So far, the company—and its customers and investors—have had little to worry about.

Even as Apple has found itself confronting numerous challenges in the smartphone market, the iPhone has remained a top performer in Apple's lineup. The handset has maintained a steady upward trend since its release in 2007, every year racking up better sales, pulling in more revenue, and accounting for a higher percentage of the company's total revenue than it did the year before.

Steve Jobs once described the iPhone as one leg of the three-legged stool that made up Apple's business; the other two were the Mac and music (on its iPods). Over the past six years, the latter two legs

have become shorter, while the ever-popular iPhone has picked up the slack.

Challenge and Opportunity

Though Apple certainly did upend the smartphone market, it didn't by any stretch of the imagination enter it as the dominant player. In its early days, the iPhone was the upstart challenging the entrenched old-guard of the BlackBerry and, to a lesser extent, Windows Mobile. Even more challenging than its somewhat late arrival to the smartphone party was the fact that smartphones in general had made only a relatively small dent in a market dominated by so-called feature phones—handsets occupying the tier of the market between basic cell phones and high-end smartphones.

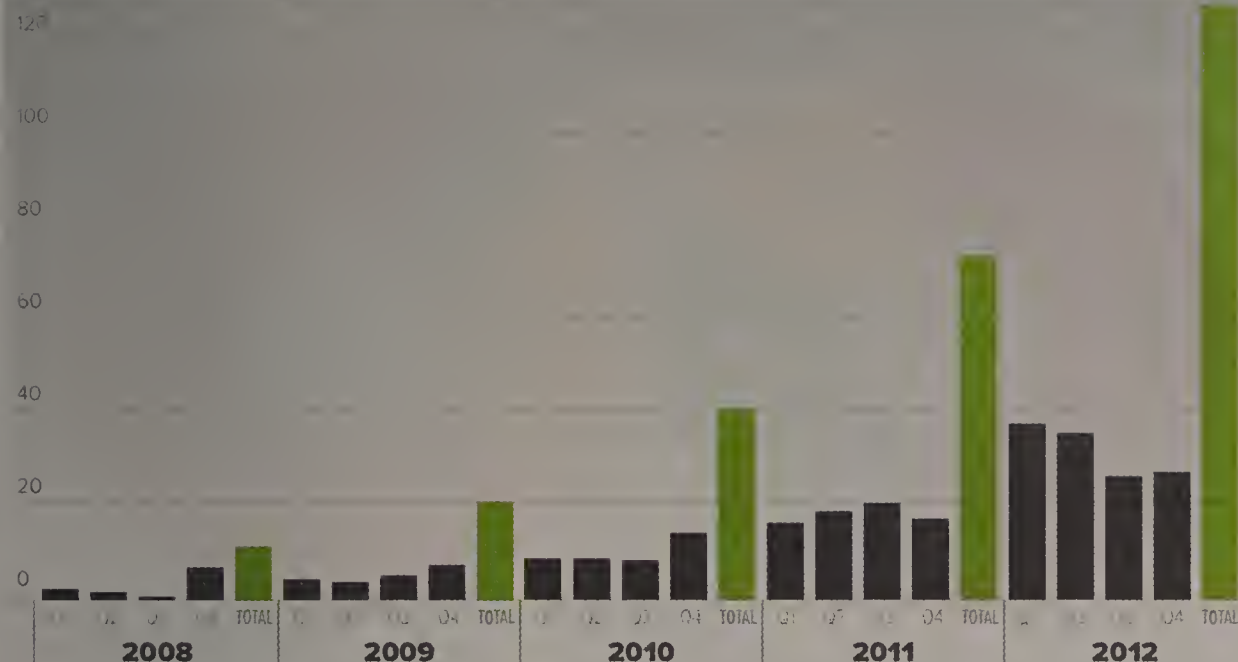
Striking that balance in the market has been Apple's great challenge—and its opportunity—over the past few years. It wasn't until the second quarter of 2013 that smartphone sales finally exceeded sales of traditional feature phones. But even now, with feature phones accounting for just under half of the world's mobile phone sales, the market still has plenty of room for smartphone sales—and Apple—to expand.

Overall, though, Apple's share of the smartphone market has remained pretty steady. According to market research firm Gartner, the iPhone captured 8 percent of the market in 2008, growing to 14 percent in 2009, 16 percent in 2010, and then holding steady at 19 percent of the market in 2011 and 2012.

Meanwhile, Google's smartphone platform, Android,

iPhone Unit Sales

Number of iPhones Sold (in millions)



Source: Apple

has skyrocketed from a mere 4 percent of the market in 2009 to an admittedly impressive 66 percent of the market in 2012.

But those gains are coming less at iOS's expense than from the likes of BlackBerry, Symbian, and other older platforms. That suggests that

iOS's segment of the market is actually pretty stable, and perhaps not as besieged as some people have feared.

Part of that is because of fragmentation in the smartphone market, and not just because of the much-ballyhooed multitude of Android versions. iOS's main rival in

the smartphone market is Android, yes, but that doesn't necessarily mean that Apple's main rival is Android's developer, Google. In fact, Google makes relatively little money off of Android, since it gives the operating system away for free to its hardware partners. The only direct revenue it

pulls in is from the phones that are made by its Motorola subsidiary.

Samsung, on the other hand, has risen from the scrum to become the primary purveyor of Android-powered smartphones, and the Korean company has positioned itself as the antithesis of Apple in the market, in patent battles, and in popular culture. At any given point in time, the company seems to offer half a dozen different phones, at a variety of screen sizes and price points.

Apple, for its part, still does very well when it comes to its balance sheet. While the company doesn't break out profits across its individual lines, the company as a whole continues to make money hand over fist.

But the iPhone is maturing as a product, and that means a new set of challenges are arising. Where does Apple's handset go from here?

It'll be interesting to see what the new low-priced

iPhone Net Sales

Net Revenue—Sales Minus Returns—in \$billions

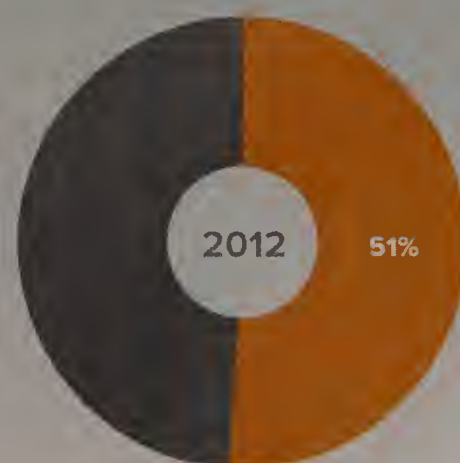


Source: Apple

iPhone Revenue

As a Percent of Apple's Total Revenue

iPhone Revenue Total Revenue

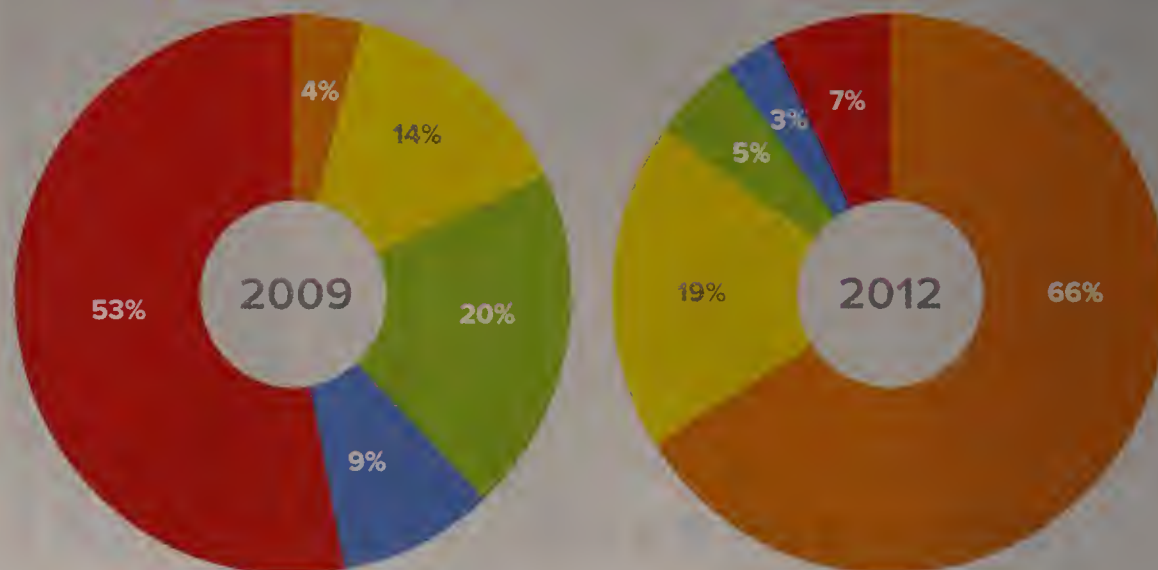


iPhone 5c (see page 40) will do for Apple's bottom line and market share. The thinking goes that an iPhone with a smaller price tag could help Apple compete at the low end of the market; of course, Apple is already trying to appeal to that segment by offering previous years' phones at lower prices—and in some cases, even for free, as long as consumers sign up for a service contract.

That strategy hasn't yielded entirely positive results, though. In Apple's third quarter of 2013, the average selling price of an iPhone dropped below the \$600 mark for the first time since 2009. That drop has been attributed, in large part, to a greater proportion of the iPhones sold being those older, cheaper models. A new model of iPhone, built from the ground up to be more affordable—some people have wished for an iPhone designed to be sold unlocked—could help reverse that trend (again, see page 40).

SMARTPHONE MARKET SHARE By Operating System

● ANDROID ● iOS ● BLACKBERRY ● WINDOWS PHONE / WINDOWS MOBILE ● OTHER



Source: Gartner

Apple Holds Its Customer Base

Conventional wisdom in the smartphone market is that Apple is losing its grip. But reality doesn't necessarily match conventional wisdom. A pitched battle is under way, but as in the operating system wars of the 1980s and 1990s, this isn't necessarily a zero-

sum game: Apple's competitors don't need to lose for Apple to win, and vice versa.

In fact, the success of the iPhone seems largely to mirror the success of Apple's contender in that earlier fight: the Mac. The company has established a niche where it can appeal to consumers who value a high-quality product

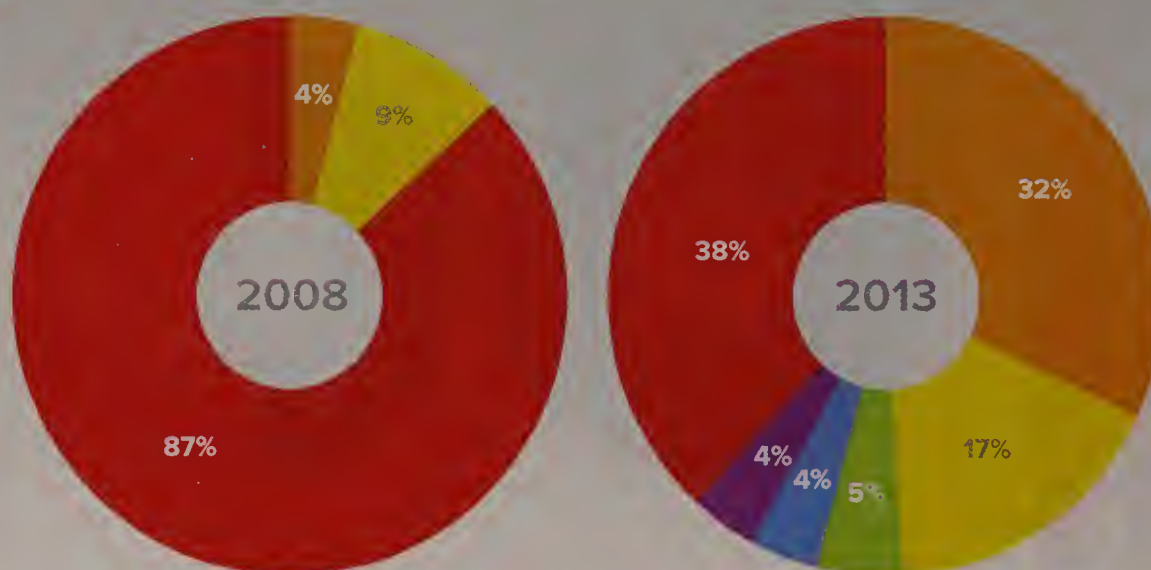
and are willing to pay a premium price. As such, Apple has maintained its customer base, even as competitors have flooded the market with cheaper alternatives. And even in a world where mobile devices are becoming more and more prominent, the Mac is still going strong, almost 30 years after it debuted.

Contrast that with the relatively short-lived, if meteoric, success of Apple's other flagship product, the iPod. While it achieved great heights in its time, in recent years it has found itself superseded by the iPhone's many and varied capabilities, and its sales and share of Apple's revenues have declined accordingly.

In the long run, even more important than Apple just keeping up with the competition is that the company continue to do what it does best and offer compelling, innovative products that consumers are willing to pay for.

SMARTPHONE MARKET SHARE By Vendor

● SAMSUNG ● APPLE ● LG ● HUAWEI ● ZTE ● OTHER



Source: Gartner

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THE iPad

by the Numbers

BY JARED NEWMAN

In three short years, Apple's tablet revolutionized the PC industry. With that work done, the iPad is taking a breather. Although it was once the fastest-selling electronic device of all time, sales have slowed considerably over the last year, and they actually declined year-over-year in the third quarter of 2013. Here's how Apple got to this point, and what the slowing sales mean for the company going forward.

iPad Impact on Apple

When Apple introduced the iPad in January 2010, the rest of the industry was miles behind. Despite many months of rumors

about an imminent Apple tablet, no other tech company was prepared to match Apple's sleek, \$500 app-consumption machine. Early Android tablets like Samsung's Galaxy Tab and Motorola's Xoom were flops, critically and commercially. When Google finally released a version of Android designed for tablets, it was buggy and slow, with few tablet-optimized apps available for it. Apple's iPad wasn't just the best tablet on the market, it was the only one worth considering.

Apple reaped the rewards. In its 2010 fiscal year, Apple sold 7.5 million iPads, and in 2011, sales more than quadrupled to 32.4 million. With

every passing quarter, year-over-year sales doubled or sometimes tripled. The last fiscal year—which ended in September 2012—Apple sold 58.3 million iPads, pulling in net revenues of \$32.4 billion. The iPad seemed to be on track for the same explosive growth that the iPhone has enjoyed for years.

Even better for Apple, the iPad was slowly representing a bigger slice of the company's revenues, reaching 26.2 percent of net sales revenue in Q3 2012. When iPad sales doubled or tripled, the tablet's revenues doubled or tripled nearly in lockstep.

But Apple's quarterly

earnings statements show a drastic change in the fourth quarter of its 2012 fiscal year, which covers July through September. Year-over-year sales increased by just 26.2 percent, and revenue jumped by only 9.3 percent. The next two quarters were better, with unit sales up by 48.1 percent and 65.1 percent year-over-year, but slower revenue gains of 65.1 percent and 32.7 percent showed that average selling prices were falling.

Then came the 2013 third quarter's unit sales decline, from 17 million units to 14.6 million units year-over-year, along with a 30.5 percent drop in revenue. The pattern of growth that once mirrored that of the iPhone had come to an abrupt end. "Our view is that the iPad is being accepted faster but likely will not be as important as the iPhone over time," UBS analyst Steven Milunovich wrote in a research note that was shared with *Macworld*.

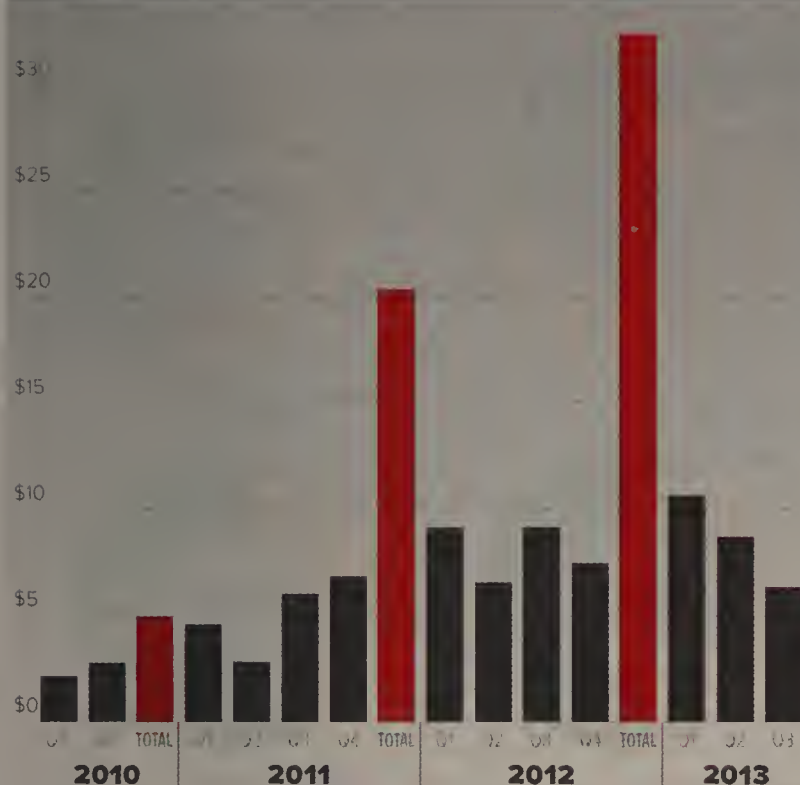
What's behind the sudden sales drop? Partly, it's just a matter of timing, as Apple shifted its launch of new iPads from spring to fall and didn't benefit from the usual new hardware sales spike. Milunovich, in his research note, offered a few other theories, such as longer upgrade cycles for tablets compared with smartphones, and faster market penetration and narrower appeal than smartphones in general.

Price Drops a Clue

But none of those theories explain the drop in the iPad's average selling prices. Sameer Singh, an analyst best-known for his accurate cost estimates of Apple

iPAD NET SALES

Net Revenue—Sales Minus Returns—in \$billions



Source: Apple

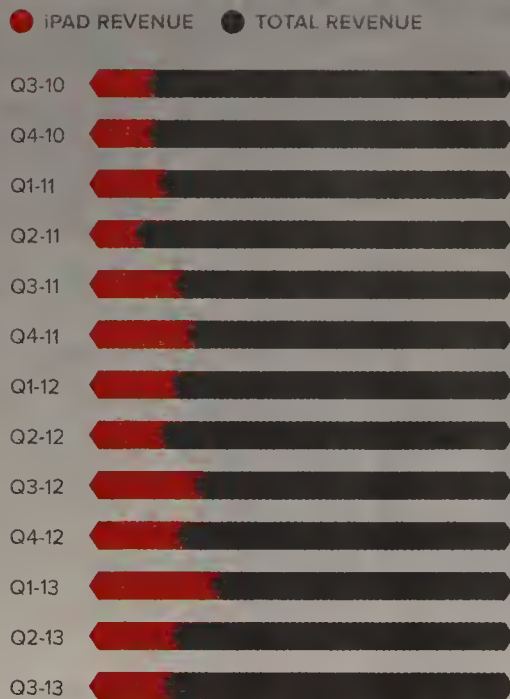
products, has suggested that Apple's shrinking revenue growth was a result of the iPad going mainstream. When Apple began selling the \$400 iPad 2 in the spring of 2012, it provided a lower entry level for new customers. The \$329

iPad mini lowered the entry-level cost even further, at the expense of Apple's profit margins.

"Early iPad buyers may have opted for models with higher storage, but the market began moving to

iPAD REVENUE

As a Percent of Apple's Total Revenue



Tab II and the Amazon Kindle Fire undercut Apple on price and were more portable than the full-size iPad. Although they didn't receive the same critical praise as Apple's iPad, their \$200-and-up price tags proved an effective lure. These iPad alternatives started getting traction in late 2011, when Amazon debuted the Kindle Fire and Barnes & Noble launched

consumers looking for a 'good enough' tablet," Singh said in an email interview.

It's also worth noting that when Apple dropped the price of the original iPad to \$400 as the iPad 2 debuted, the company didn't feel the need to permanently offer an iPad at that price point, because the company still didn't have any noteworthy competition. Everything changed, however, when small, cheap tablets began to flood the market. So to blame slower iPad sales solely on hardware cycles and late adopters would be to understate the profound impact that cheaper tablets are having on Apple's business.

Competitive Landscape

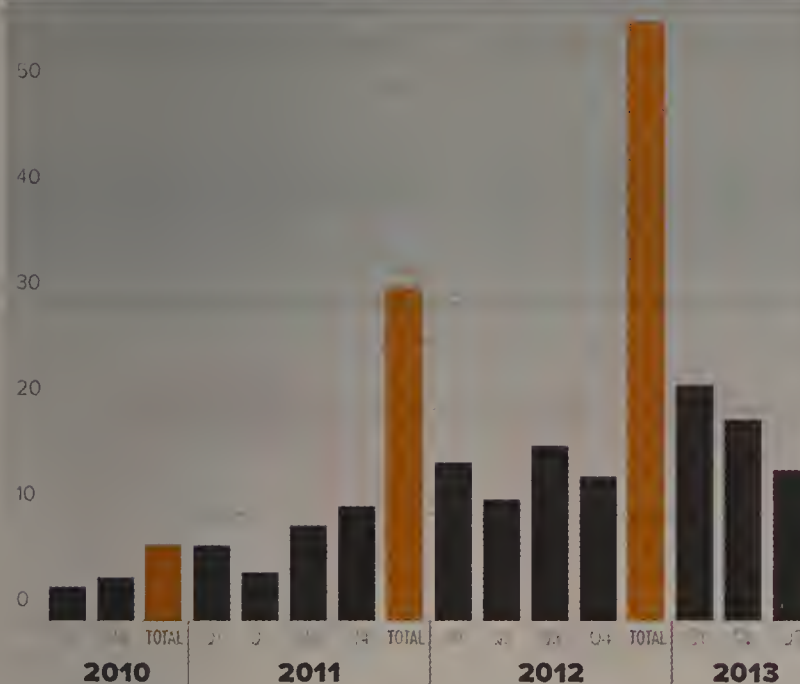
After more than a year of futile attempts to mimic the full-size iPad, Android tablet makers finally found a better angle of attack: 7-inch slates like the Samsung Galaxy

the Nook Tablet. According to IDC, Apple's rivals grabbed 48.3 percent of the market during that holiday quarter. (Disclosure: IDC and *Macworld* are both owned by IDG.) From there, Apple's rivals began experiencing the kind of dramatic growth that the iPad had enjoyed in its early days, with year-over-year shipments increasing by at least 100 percent in nearly every quarter. In the quarter ending December 2012, iPad alternatives were finally on top, with 29.6 million units shipped, compared with 22.9 million iPads sold.

A theory circulated, shortly after Amazon's Kindle Fire launched, that these cheap tablets were like fruitcakes: Because Kindle Fire shipments tended to crater after the holiday season, pundits wondered whether these were the kinds of tablets that you bought as gifts but would never use yourself.

iPAD UNIT SALES

Number of Tablets Sold (in millions)



Source: Apple

That theory isn't holding up as strongly anymore, as Android has matured and tablets like Google's Nexus 7 have launched to critical acclaim. According to IDC, Apple's rivals shipped 29.7 million units in the first quarter of 2013—a narrow gain over the previous quarter. The post-holiday cratering of Android tablet shipments has ceased, and last quarter, while iPad sales were falling, Apple's rivals shipped 30.5 million units—a gain of 169.9 percent year-over-year.

If you can put a positive spin on this trend for Apple, it's that the iPad mini now looks like a brilliant defensive move. Rhoda Alexander, senior manager of monitors and tablets for IHS iSuppli, said that the iPad mini represented 60 percent of iPad sales last quarter. IHS projects that the mini will represent 61 percent of iPad sales in all of 2013. The market has shifted toward smaller, cheaper tablets—and it's a good thing Apple was ready.

Sameer Singh says that if Apple hadn't introduced the mini, the iPad's sales probably would have been far worse than they are today. "I

think it's now clear that the full-size iPad's market position wasn't sustainable given the influx of low-cost devices," he wrote in an email.

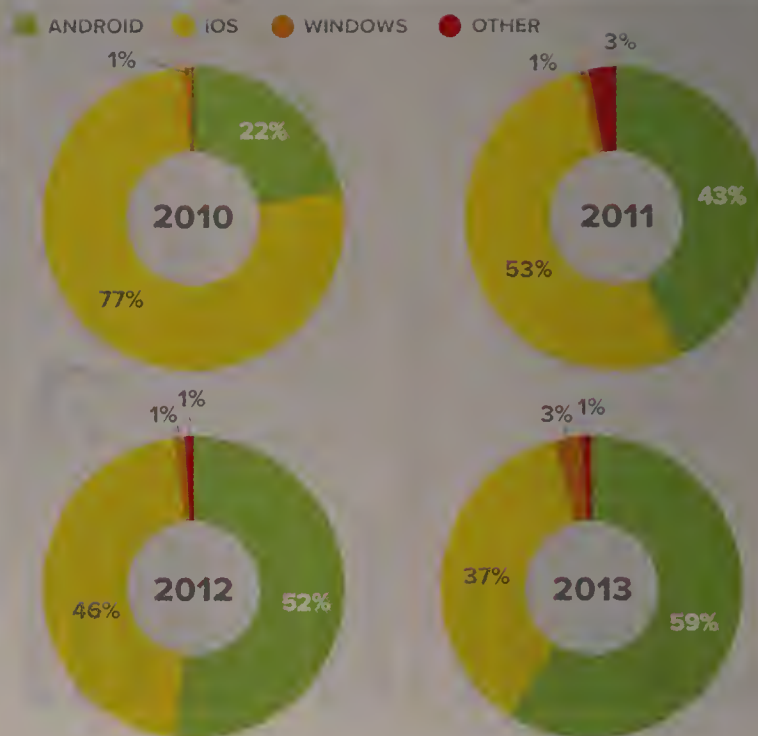
The other upside for the iPad is that it continues to outshine its rivals in usage share. A recent report by Chitika Insights claimed that 84.3 percent of tablet Web traffic in the United States and Canada comes from the iPad. Despite Android's market-share gains, people don't seem to be using those iPad alternatives as much.

"Research suggests a substantial buyer remorse for low-cost tablets," UBS's Steven Milunovich wrote in his research report. "Apple might be right about its superior user experience luring Android customers to switch over time, and growth will reaccelerate."

Apple's success with the 9.7-inch iPad also puts the company in a better position than Android tablet makers, who have struggled to sell tablets with larger screens. IHS iSuppli's Alexander believes that the market will swing back to larger tablets—perhaps even larger than 10 inches—in 2015 and 2016, as

TABLET MARKET SHARE

By Operating System



Source: IDC

people seek to derive more productivity from their tablets.

"The challenge for Apple and the Android players in the market will be, if you want to move this product to a larger screen size, you have got to make a use case that makes it compelling for users," Alexander said in an interview.

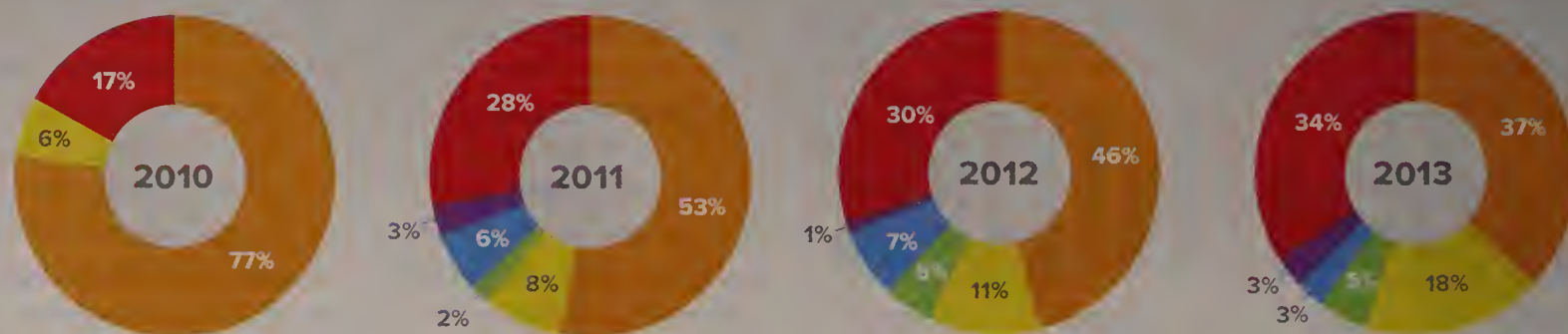
In the meantime, look for Apple to recalibrate. The next full-size iPad will reportedly

have a new design, resembling the iPad mini's narrowly beveled chassis. Meanwhile, the iPad mini could possibly get a Retina display. Both devices, along with the overhaul of iOS—version 7—will likely give Apple a much-needed boost. Gone are the days of magic and revolution—and the extraordinary sales that came with it—but the iPad still has room to grow.

TABLET MARKET SHARE

By Vendor

APPLE SAMSUNG ASUS AMAZON ACER OTHER



Source: IDC

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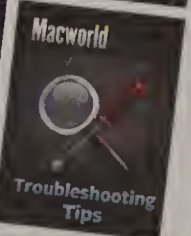
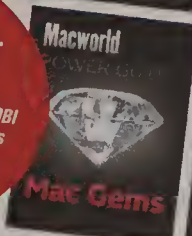
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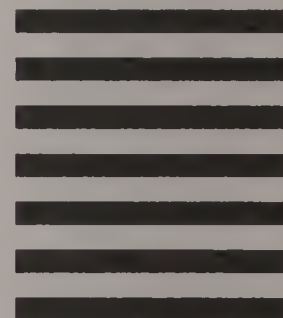
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THE IPOD

by the Numbers

BY LEX FRIEDMAN

Though the iPod still generates billions of dollars in revenue for Apple each year, it's clear that the portable digital music player's heyday has passed—not that anyone in Cupertino is likely to be too concerned about that.

When the iPod debuted on October 23, 2001, it didn't start out as a smash hit. It was not the first portable digital music player, of course, and it then worked only with the Mac. It also earned scorn from some people for having no wireless capability and for offering less space than its competitors. Apple sold just 125,000 iPods in its first few months.

But soon the iPod exploded in popularity. In 2002, Apple made PC-compatible iPods,

added more storage capacity, and lowered the prices. And in October 2003, two years after unveiling the first iPod, Apple

shipped iTunes for Windows. Until then, PC customers had had to sync their iPods with third-party software. But

iTunes' tight integration with both the iPod and Apple's nascent iTunes Music Store propelled the device to massive popularity.

In 2003, Apple sold just under a million iPods, for net revenue of \$345 million. Sales more than quadrupled the next year—Apple sold 4.4 million iPods for \$1.3 billion in revenue. In 2006, iPods accounted for \$7.7 billion dollars—from more than 39 million units sold that year—making up a full 40 percent of Apple's total revenue that year.

Then, something happened.

The iPhone Juggernaut

Over the next two years, the iPod's revenue would continue to grow: \$8.3 billion in 2007, over \$9.1 billion in 2008—more than 50 million iPod units in each of those years. But while the iPod's dramatic growth continued, the device's impact on Apple's overall business only shrank.

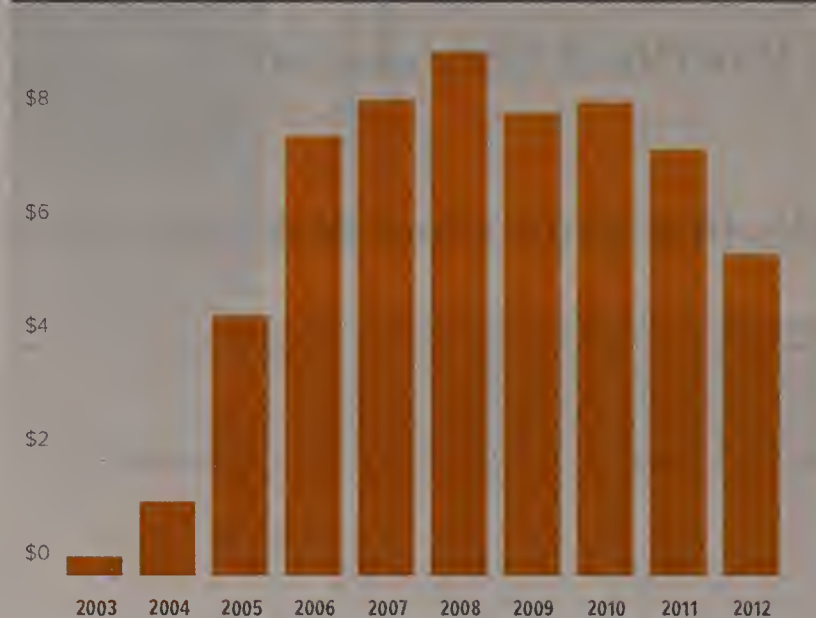
In 2008, even as the iPod generated more than \$9 billion in revenue, and even as it achieved sales milestones, it dropped from constituting 40 percent of Apple's revenue (in 2006) to merely 28 percent.

That's because Apple introduced another product in late 2007 that would blunt the iPod's impact on the company—a little device called the iPhone. What helped drive Apple's ascendancy as one of the world's most valuable companies was the stunning amount of revenue generated by the iPhone.

In 2010, the iPhone and iPod began to cross paths in terms of their percentages of Apple's overall revenue: The iPhone generated 39 percent of the company's revenue

iPOD NET SALES

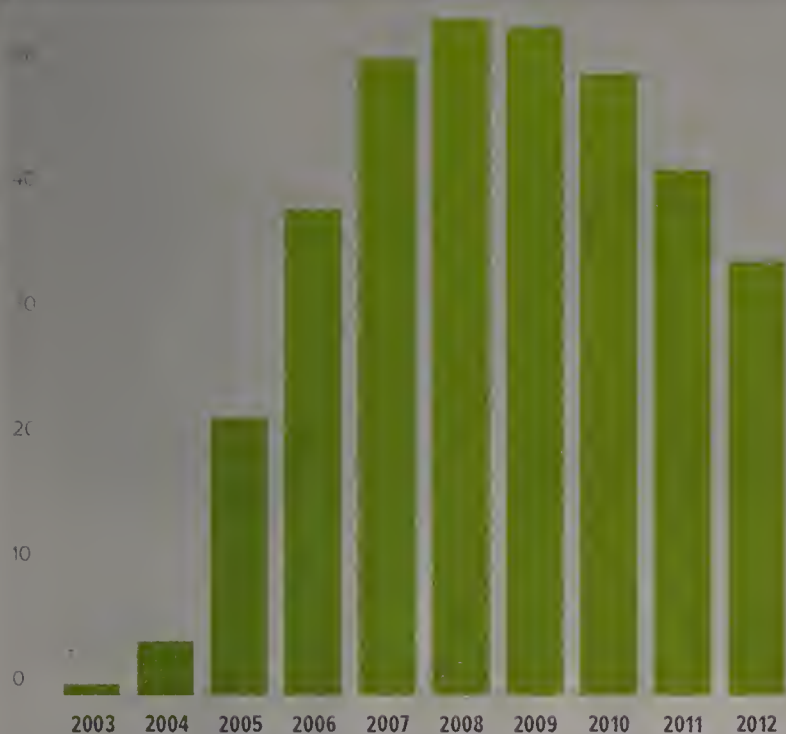
Net Revenue—Sales Minus Returns—in \$billions



Source: Apple

iPOD UNITS SHIPPED

(in millions)



Source: Apple

that year, compared with the iPod's 13 percent.

From 2010 on, the iPhone's importance to Apple's revenue picture would only rise, and the iPod's would only fall. By 2012, the iPod accounted for just 4 percent of Apple's revenue, less even than it had generated in 2003. Also in 2012, the iPhone accounted for more than half of Apple's revenue—a level that the iPod never reached.

Amazingly, even as the iPod's financial importance to Apple plummeted, its sales didn't—at least for a while. As recently as 2010, Apple still sold 50 million iPods in a year.

But in 2011 and 2012, the number of iPods sold did drop significantly.

Drop It Like It's Hot

In 2011, Apple sold 42.6 million iPods. The following year, it sold just 35.2 million. Even at these depressed numbers, however, it's worth noting that the iPod still

generated \$5.6 billion in revenue for Apple in 2012. That's the kind of "declining" business many companies would be happy to suffer.

But even though the iPod is still profitable, and is still a nice-size, hobby-esque business, it's clearly a dying one. And Apple has no reason to fight its inevitable demise.

Instead of trying to artificially prop up the iPod market, Apple is simply focusing the bulk of its attention on the areas of its business whose growth has not peaked.

That's why the iPhone has a great music player and Apple has (finally) released iTunes Radio (as part of the iOS 7 update). These kinds of technologies sell more iPhones—and iPhones are substantially more profitable than iPods.

Apple killed the iPod's significance itself: first by obviating need for iPod revenue through the launch of the iPhone (and later, the iPad), and then by making its music player's entire feature set—the ability to store owned music—less and less compelling.

But that doesn't mean Apple will stop making iPods any time soon. Even a company as rich as Apple won't give up on a multibillion-dollar business until it's forced to.

The Music Landscape

Apple says that the iPod still accounts for about two-thirds

of the digital music player market. Creative Labs offers its line of Zen music players, some of which look an awful lot like the iPod. SanDisk, too, makes a variety of iPod-esque digital music players. But few people buy them.

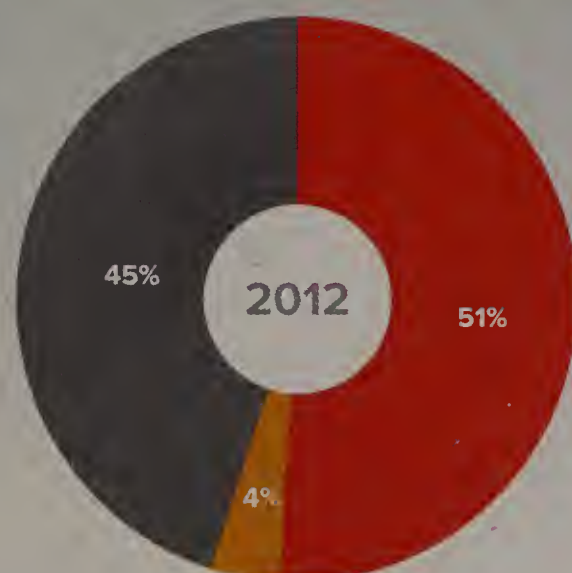
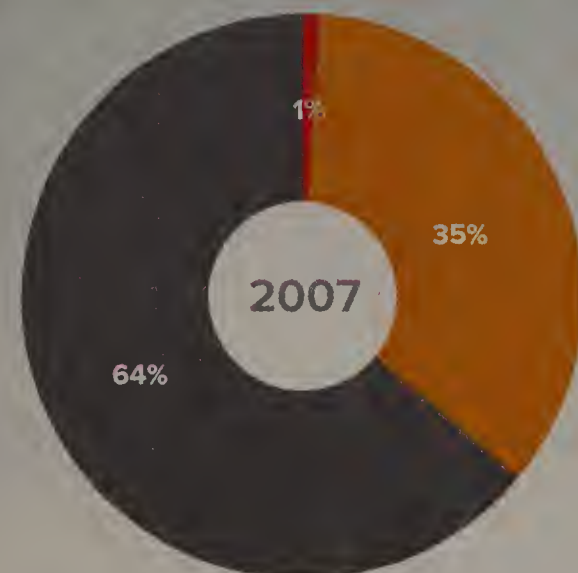
Most customers still in the market for dedicated digital players still appreciate Apple's hardware and software refinements, and keep buying iPods. The trouble is, most of them already own one by now. Even more significantly, smartphones and tablets are, for many, eliminating the need for an iPod: If your iPhone can store enough of your music library to satisfy you, then why bother carrying a separate device?

What's more, Apple (and others) clearly recognize the appeal of streaming music. The iTunes Match service marked Apple's initial foray into streaming music. It meant that you didn't need any disk space to keep songs on your device. And now iTunes Radio makes the streaming option freely available to anyone.

iPOD VS. IPHONE

As a Percent of Apple's Total Revenue

● IPHONE ● IPOD ● TOTAL REVENUE



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BY MACWORLD STAFF

THE BUDGET TRAVELER

Whether you prefer a laptop or an iPad as your mobile workstation, you can't use it alone—you need to bring along other stuff to make it truly useful and to protect it from road hazards. You don't need to spend a bundle, though: There are plenty of affordable options. Here's the budget-priced gear we recommend you take on your next road trip.



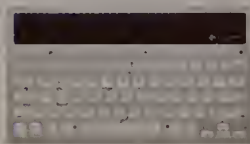
Input

GRIFFIN TECHNOLOGY ELEVATOR, LOGITECH K760

A laptop stand and an external keyboard can make using your laptop a lot more comfortable when you are back at your desk. The Elevator (griffintechnology.com) is a solid stand with a budget price of \$40.

Logitech's \$80 Wireless Solar Keyboard K760 (logitech.com) offers great, Mac-focused keys in a compact package. Ambient light charges its battery, and the K760 can link (via Bluetooth) with up to three devices, so you can use it with your iPad and iPhone.

You'll also find plenty of great iPad stands on the market (see go.macworld.com/ipadstands). For a solid stand for cheap, however, consider book stands such as the Fellowes Wire Study Stand (fellowes.com).



Satechi Bluetooth Wireless Smart Keypad

If you'd like a calculator that also pairs with your Mac to give you the numeric keypad your compact keyboard lacks, Satechi's \$35, Mac-matching Bluetooth Wireless Smart Keypad (satechi.net) fits the bill.

Pair this keypad with your MacBook, and a single button will toggle it between being a stand-alone calculator and a Bluetooth numeric keypad. In calculator mode, a clever Send button lets you paste your calculations to your Mac with a single press. The keypad also pairs with an iPad or iPhone for number-entering sessions on the go.



Satechi USB Hubs

On the road, your hotel-room desk can end up playing host to more than a few USB accessories. To avoid the hassle of frequent cable-swapping, you'll need a USB hub. Satechi (satechi.net) offers a couple of good choices here. The \$28 Premium 4 Port Aluminum USB Hub sports a compact, Mac-matching, aluminum body; four bus-powered USB 2.0 ports; and a conveniently short USB cable. The \$55 7 Port USB 3.0 Premium Aluminum Hub uses a similar Mac-matching, aluminum-body design, but it offers seven USB 3.0 ports, all powered through an included AC adapter.



Protection

Moshi, KB Covers Keyboard Covers

If you want to keep crumbs, dust, and other detritus from gunking up your MacBook's insides, Moshi's \$25 Clear-Guard cover (moshimonde.com) does the trick with minimal distraction. The superthin, transparent film is custom-designed for each MacBook keyboard.

KB Covers (kbcovers.com) also offers several good options (\$25 to \$30) in a variety of colors and designs.

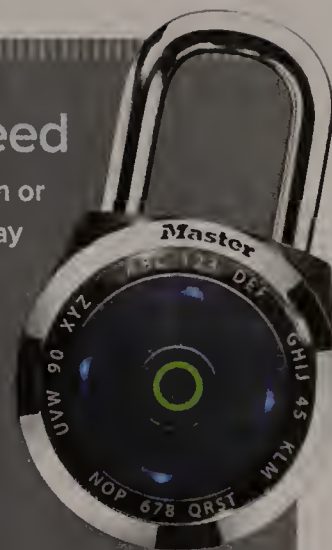


Master Lock DialSpeed

There are plenty of times—at the gym or at school, for example—when you may need to lock your gear up with a padlock. But combination padlocks are a hassle, and who wants to carry around (and possibly lose) a key? Master Lock's \$40 DialSpeed padlock (masterlock.com) gives you the no-key convenience of a combination lock without the tedious “two turns to the right until you get to 37, then left past 37 until you get to 4...” instructions.

The DialSpeed instead uses a directional keypad. Your combination consists of a pattern of 4 to 12 directional presses—for example, left-up-up-down-right-left. (Letters and numbers next to each button let you create a memorable code, if you wish.)

An account on MasterLockVault.com gives you access to your master code and lets you store multiple codes.



MOSHI iVISORS

To prevent fingerprints and scratches from marring your screen, turn to Moshi's custom-size iVisor Air (\$35 to \$37) or iVisor Pro (\$37 to \$39) screen protectors for MacBook Air and MacBook Pro models (moshimonde.com). Unlike most protective screen films, iVisors are made of stiff material that adheres only to the edges of the screen. This design translates into quick-and-easy installation and no screen bubbles. Moshi uses a special adhesive that lets you remove, wash, and reapply the iVisor as needed.



Transportation

TOM BIHN SYNAPSE 25

If your bank balance can handle it, consider springing for the combination of a great all-around backpack and a separate laptop sleeve. Few backpacks can beat Tom Bihn's \$170 Synapse 25 (tombihn.com). Though it's a bit pricey, this bag will last for years, and it's also very versatile thanks to the array of well-designed pockets and pouches.

A pouch on the inside is perfect for stashing a laptop or iPad in a protective sleeve; and you can also attach up to two of the company's Cache With Rails sleeves to special loops on the inside of the bag.



Otterbox Defender for iPad Mini

If you're looking to protect your device, look no further than Otterbox's rugged \$70 Defender series case for the iPad mini (otterbox.com). This case certainly won't win any "sexy and sleek" contests, but it will protect your tablet better than most.

The Defender comes in several parts. First, there's a slim, two-piece plastic shell that snaps onto the tablet. Next, there's a stretchy black silicone layer that fits around the plastic shell. Finally, there's a sturdy, rigid screen cover that doubles as a stand.

SwitchEasy CoverBuddy

The \$20 CoverBuddy (switcheasy.com) is a slim rubber hard-shell case that works to protect the back of your Smart Cover-clad iPad mini. And when we say "slim," we mean it: It's a svelte 1.5mm thick. It snaps onto the back of the iPad with minimal effort. The case has tiny holes around the iPad's speakers to allow sound out; it also includes cutouts for the Lightning port, the rear camera, the slide switch, the top microphone, and the headphone jack.

As designed, the CoverBuddy works beautifully with a Smart Cover: It covers everything that the Smart Cover doesn't, and matches its look nicely. The rubbery texture is less slippery than the naked iPad mini's back and is comfortable in the hand, and it doesn't detract much from the iPad's good looks.





Be.ez LA Robe Sleeves

When it comes to laptop sleeves, your options are nearly limitless. But we're fans of Be.ez's LA Robe series (be-ez.com). Available for all MacBook sizes, as well as in versions for iPads and other tablets (price varies by size), each LA Robe sleeve is made of a lightweight memory foam for impressive protection that adds only a few ounces to your bag.

Printed jersey fabric covers the exterior of each sleeve, and Be.ez offers dozens of designs, from basic to fashionable.

HIGH SIERRA SWERVE LAPTOP BACKPACK

If you're truly on a budget, High Sierra's \$40 Swerve Laptop Backpack (highsierra.com) offers lots of storage—including room for both a laptop and an iPad—at a nice price. Amenities include elastic-suspension shoulder straps, side compression straps, dual water-bottle pouches, and pockets galore. In fact, given its wallet-friendly price, the biggest knock on this bag is that it might be too big: With 2400 cubic inches of storage, think of your back before loading it up.



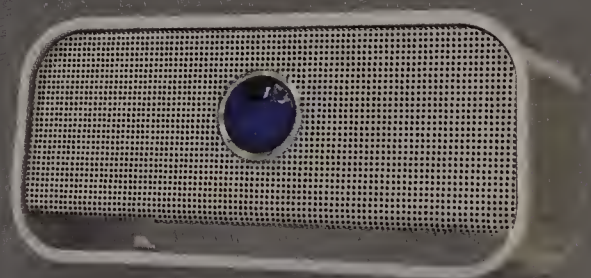
Sound



Sony MDR-V6, MDR-7506

When you're traveling, you need a good set of headphones, preferably closed, over-ear cones that will keep external noise out and your music in. Sony's \$100 MDR-V6 and \$130 MDR-7506 headphones (sony.com) fit the bill at budget-friendly prices (both can be found at much lower prices).

These almost-identical models offer studio-quality audio in a rugged package. The earpieces fold in for easier stowing, and the cushiony earpads and headband let you enjoy hours-long sessions.



Brookstone Big Blue Live

Finding good, versatile speakers on a budget is tough, but Brookstone's surprising \$100 Big Blue Live (brookstone.com) is just that. It offers wired and Bluetooth connectivity—so you can use it on the road and at home, with an iPad, iPhone, iPod, or Mac—in a glossy black or white, desk-ready chassis. The Live includes a rechargeable battery and is small enough to toss into your bag for portable use.

Working Mac

Tips, Tricks, and Tools to Make You and Your Mac More Productive



Don't Run Out of Juice

Macworld Lab finds out what really works when it comes to keeping iPads and iPhones charged.

BY JAMES GALBRAITH

Our iPads and iPhones make great travel companions. These devices offer quick access to step-by-step directions, public-transit information, restaurant recommendations, and email on the go—and as a result, they tend to spend more time in our hands than in our pockets or bags. But how can you avoid running out of power?

We've heard a lot of conventional wisdom about how to keep iOS devices charged and ready. To separate fact from fiction, Macworld Lab grabbed a fourth-generation iPad and an iPhone 5 and started charging them, draining them, and timing different tasks and scenarios. Here's what we discovered.



'Screen brightness affects battery life.'

Heck yeah, it does. Screen brightness was the single most significant contributor to battery depletion that we found. At full brightness and in Airplane mode, our iPhone 5 lasted 6 hours, 21 minutes while playing 720p video from a movie file. When we set the screen to half brightness, the phone lasted 9 hours, 48 minutes—that's 3 hours, 27 minutes longer than the battery lasted with the screen set to full bright-

ness. In similar video tests, our iPad's battery lasted twice as long when set to half brightness as when set to full. To change your screen's brightness, tap *Settings*, tap *Brightness & Wallpaper*, and then adjust the Brightness slider.



'AirPlay streaming from my device to a TV will quickly drain the battery.'

You might think that accessing a movie file on your iOS device's internal flash storage and then streaming the movie to

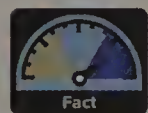
Screen brightness was the single most significant contributor to battery depletion that we found.

an AirPlay device takes a toll on battery life, but it didn't in our tests. Our iPad streamed high-definition video to an Apple TV—connected Sony Bravia for a whopping 13 hours, 45 minutes. And after all that time, it still wasn't close to running out of steam: When we stopped the test (to, you know, go home and see our families and stuff), the iPad's battery still had 82 percent of its capacity.



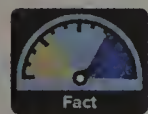
'Using iTunes Home Sharing to stream video from a Mac to my iOS device drains my battery faster than watching a movie already stored on my iPad.'

Reversing the direction of the signal—that is, playing a movie from a computer on our Wi-Fi network on the iPad—took much more energy, mainly due to the demands of the iPad screen. Set to full brightness, the iPad managed to play the video for 5 hours, 34 minutes, or 50 minutes less than it delivered when the video was playing from a file stored on the device itself.



'Airplane mode saves battery life.'

Aside from keeping the flight crew happy and the aircraft's instruments interference-free, Airplane mode can help to preserve your device's battery life. That one little setting turns off multiple wireless features, including Wi-Fi, the cellular antenna, GPS, Bluetooth, and Location Services. We squeezed nearly 30 extra minutes of video playback from our iPhone 5—going from 5 hours, 54 minutes with Airplane mode off to 6 hours, 21 minutes with Airplane mode enabled.



'A battery pack will help my phone last longer.'

Apple, and other portable-device manufacturers, must find a balance between a product's battery life and its weight, size, and aesthetics. Apple could make an "iPhone MAXI" that was 2 inches thick, weighed 2 pounds, and might be able to play 20 hours of video, but the phone's heft and bulk would probably make it fatally unpopular.

On the other hand, when you tempo-

rarily need a little extra battery capacity, you can turn to a host of third-party companies whose iPhone cases, while increasing your handset's weight and bulk, also extend its battery life and protect its screen from damage during a fall. One such case, the Mophie Juice Pack Plus (🔋🔋🔋¹), which contains a 2100-mAh built-in battery, helped our iPhone 5 play almost twice as much locally stored video at full brightness as the iPhone could play on its own.



'Battery utilities help to increase an iPhone or iPad's battery life.'

The iOS App Store is chock-full of utilities that claim to boost battery life. We looked at several battery apps for iOS, such as Beijing Kingsoft Internet Security Software's free Battery Doctor (go.macworld.com/bdoctor), Philips's free BatterySense (go.macworld.com/bsense), and Appware's free Sys Activity Manager Lite (go.macworld.com/syslite). Most provide a similar set of data about your iPad or iPhone's battery, including an estimate of the remaining battery life under current conditions, and estimates based on your turning off Wi-Fi or ceasing to surf the Web. Most of these apps also offer tips for getting the most out of each charging cycle, though the tips seem to come from Apple's own website. So although the apps we looked at don't do anything themselves to prolong battery life, they do supply valuable information that might help you to conserve power.



'Calibrating my battery will help to preserve battery life.'

As you leave the house, you check your phone and see that you have 4 hours of battery life remaining—but 3 hours later, it runs out of juice. If this has happened to you, your iPhone or iPad might need a battery calibration. Apple recommends that you periodically drain your iPhone or iPad's battery totally and then charge it until it's completely full. This process, called calibration, helps your device estimate its remaining battery life more accurately. Calibrating your battery will

ensure that you know when to charge the battery, but the procedure doesn't make the battery itself last longer.



'Turning off equalization during audio playback will increase battery life.'

We found this tip on Apple's website, and a few battery utilities offer the same advice. To test its validity, we took a fully charged iPhone and looped an audio playlist with equalization on and off. (To adjust equalization on your iPhone, tap *Settings*, tap *Music*, tap *EQ*, and choose a setting.) After 26 hours, 41 minutes, the battery of the iPhone without equalization had dropped to 84 percent. When we ran the same test with equalization on and used the iPhone's Hip Hop setting, the iPhone battery was still at 85 percent of its capacity when the test was over. So in our tests, equalization had no significant effect on battery life.



'Maps and directions can seriously drain an iOS device's battery.'

To conduct this test, I used iOS's Maps app during my commute from my home in Walnut Creek, California, to my son's Lego Robotics camp in San Francisco's Mission District (about 25 miles away) and then to work in downtown San Francisco. This test was difficult for the app to handle, for a couple of reasons. First, the app was attempting to give me driving directions while I was riding a BART commuter train. As a result, it continually had to recalculate my route based on the streets near the BART tracks. Second, my train passed through a few tunnels along the route, so my iPhone had to search for GPS while switching from cell tower to cell tower. In total, my commute included a 2.4-mile drive, a 1.5-mile walk, and 55 minutes of train commuting. All told, the trip took me almost 2 hours and ate up 51 percent of the iPhone's battery capacity. Over the same route, with Location Services on but not intentionally in use, the battery expended just 1 percent of its capacity.

Macworld Lab testing by Albert Filice.

Five iCloud Email Tricks You Might Have Missed

Take advantage of all this free email account has to offer.

BY KIRK McELHEARN



If you have an Apple ID, then you have an iCloud email account. This free account gives you up to 5GB of storage for your messages, minus what you use for documents and other data you store in the cloud. It's easy to work with your iCloud email in Apple's Mail, either on the Mac or on an iOS device. Still, you may not know about the many options and features available if you log in to iCloud via the Web.



Before you can take advantage of the following five tips, you need to turn on iCloud. Even if you have an Apple ID for use on the iTunes store, you may never have set up iCloud; for details on doing so, see go.macworld.com/icloudsetup.

1. Access Email Anywhere

While you may check your email on your Mac, iPhone, or iPad, you can also access your messages on the Web. This option is useful not only if you need to obtain or send email from a shared computer, but also if you have to receive or send files when you're on the road. Just

log in to icloud.com, and then click the Mail icon. You'll have access to all of your email—and all of your contacts, if you've set iCloud to sync them—so you can send and receive both messages and files.

The feature can be especially convenient if you need to grab a file and print it out when you're visiting a client or a friend.

2. Avoid Spam With Aliases

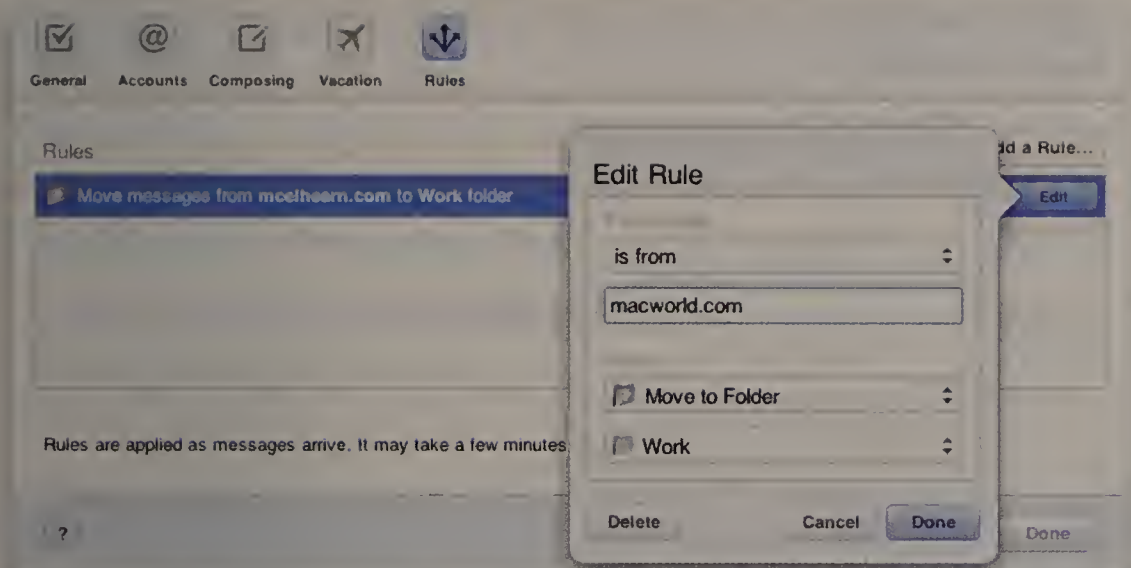
Although you have only one iCloud email account, you can set up aliases, or other addresses for sending and receiving email with that account. In the iCloud email preferences, click *Accounts* and then, below the account list, click *Add an alias*. When you're creating an alias, a warning will appear if the one you want is taken.

Create Mail Alias

Use aliases to prevent receiving unwanted messages at your primary account. Aliases cannot be changed, transferred or converted to primary accounts. [Learn More](#)

Alias	Full Name
<input type="text" value="Name"/> @icloud.com	<input type="text" value="Kirk McElhearn"/>
Label	Label Color
<input type="text" value="Shopping"/>	<input type="color" value="#FFCC00"/> <input type="color" value="#00CCFF"/> <input type="color" value="#CCFF00"/> <input type="color" value="#FFCCFF"/> <input type="color" value="#CCFFCC"/>
<input type="button" value="Cancel"/>	<input type="button" value="OK"/>

Create Aliases to Avoid Spam Set up email aliases to protect your main address from junk. Use an alias to sign up for online newsletters, for example, or to post on message boards.



Filter All of Your Email You can create rules so the iCloud server will act on your email before the messages reach your Mac or your iOS device.

You can choose up to three aliases; for instance, you may want one for shopping and another for friends, reserving your main account for work. To avoid receiving spam on your main address, use an alias when you have to register for a website.

3. Create Rules That Work on All Your Devices

You can set up rules—filters that act on incoming email—using Mail for OS X. But these rules work only on your Mac; they don't affect your iPhone or iPad, unless you leave the Mac on all the time. If your Mac isn't running, your email will simply flow into your iCloud account's inbox.

On the icloud.com website, you can set up rules that will move messages before they reach your devices. For example, you can filter email so that messages from your employer go into a specific mailbox.

First, create a new mailbox. With iCloud on the Web, click the plus sign (+) next to *Folders*, and then type a name for the new mailbox. Next, click the gear icon at the top right of the iCloud Mail interface, and choose *Rules*. Click *Add a Rule*, and select one of the conditions, such as if a message is from a specific person or has a subject with a particular word. In the next field, enter an email address (for a specific person), a domain name (for any messages coming from that domain), one or more words for subject filtering, or the like.

In the next section, choose *Move to Folder*, *Move to Trash*, or *Forward to*. Then

select the folder that should receive the message, or the address to which you want to forward it. Click *Done*.

4. Tell Colleagues You're Away

Here's something you can't do in Mail on the Mac, or on iOS. If you're away from work, you can set an auto-response to say when you'll be back. Click the gear icon at the top right of the iCloud Mail page, and click *Preferences*. Click the *Vacation* icon, and check *Automatically reply to messages when they are received*. Enter the text you'd like the system to send, and click *Done*.

You can combine this tip with rules to route work messages to colleagues, too. After you've made the auto-response, click *Rules*, create a rule for specific addresses or domains, and forward the messages to the person at work who's filling in for you. When you get back, just delete the rule.

5. Forward to Another Account

You can choose to forward all the messages received in your iCloud account to another account. This way, you can view your iCloud email when you check your main account—instead of checking two accounts, you can check just one.

Click the gear icon at the top right of the iCloud Mail page, select *Preferences*, and click *General*. Next to *Forwarding*, check *Forward my email to*, and enter an email address. Check *Delete messages after forwarding* if you don't want messages clogging up your iCloud mailbox.



Easily Encrypt Folders

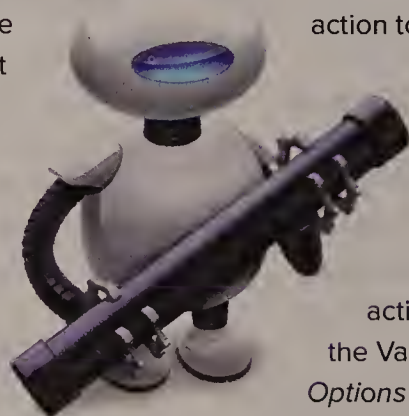
A simple Automator workflow makes data security a snap.

BY CHRISTOPHER BREEN

You can use Apple's Disk Utility to convert a folder into an encrypted disk image—a protected archive that you unlock with a password. Such images are particularly helpful when you're working on confidential company documents away from the office or when your business card reads "International Person of Mystery." But the truth is that creating encrypted disk images with Disk Utility is cumbersome. Thankfully, with a simple Automator workflow, you can secure documents in an instant.

Create the Workflow

Launch Automator. In the template chooser, select *Application* and click *Choose*. Next, select the *Utilities* library, and from it drag *Set Value of Variable* into the workflow area over on the right side. Now select the



Files & Folders library; from its list of actions, drag *New Disk Image* into the workflow area, after *Set Value of Variable*. Return to the *Utilities* library and drag *Get Value of Variable* into the workflow. Finally, return to the *Files & Folders* library and add *Move Finder Items to Trash* to the workflow.

In the first action, 'Set Value of Variable', click the Variable pop-up menu. In the Variable Options window that appears, enter **sourceFolder**.

Click *Options* within the New Disk Image action, and enable the *Show this action when the workflow runs* option. Configure the Size pop-up menu in this action to read *Size Disk Image to fit contents*. Enable the *Encrypt* option. Within the 'When done' pop-up menu, choose *Unmount and return the image file*.

In the 'Get Value of Variable' action, choose *sourceFolder* from the Variable pop-up menu. Click the *Options* button; finally, enable the op-

Easy Encryption With the help of this completed Automator workflow, encrypting a folder full of files is quick and straightforward.

tion called *Ignore this action's input*.

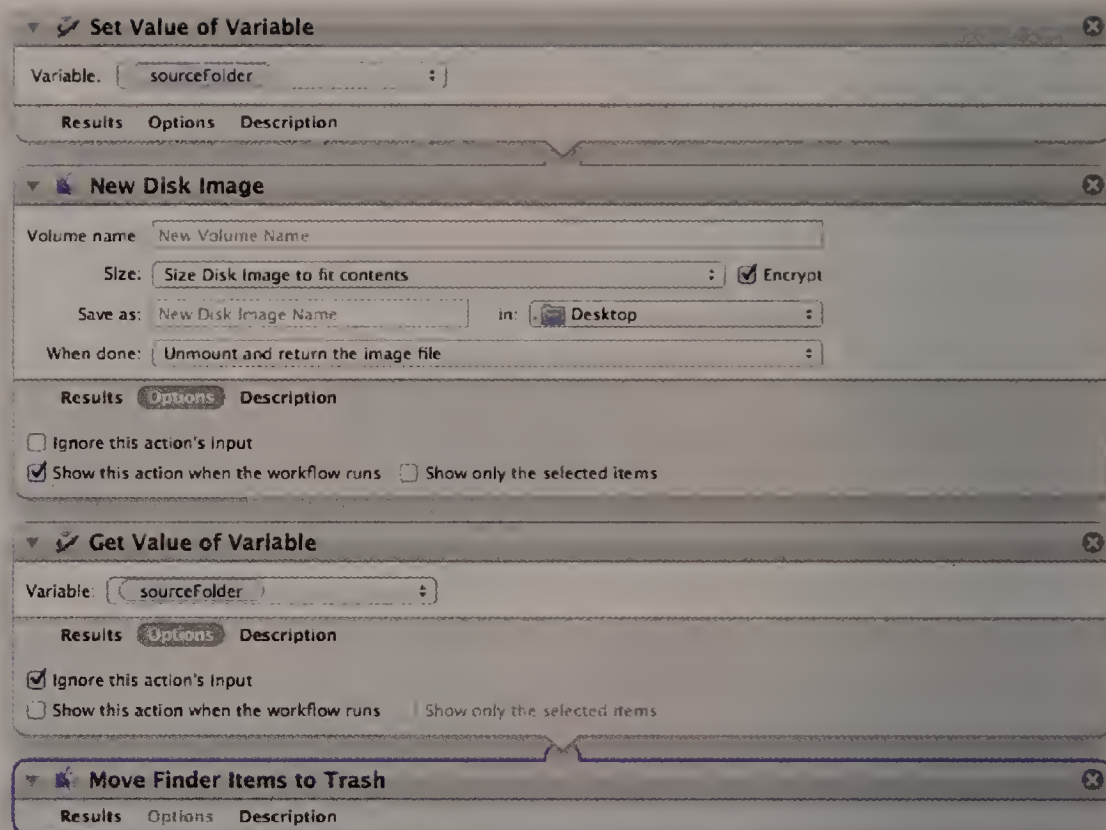
Choose *File* → *Save*. In the sheet that appears, name the application **Encrypt Image** and save it to the desktop.

Work the Workflow

To use your new application workflow, simply drag a folder that you'd like to encrypt on top of it. When you do this, a New Disk Image window will appear. Enter a name for your mounted volume in the 'Volume name' field. If you wish, you can additionally enter a name for the disk image in the 'Save as' field. Click *Continue*, and you'll see a password window where you must enter and verify a password for the disk image.

If you leave the *Remember password in my keychain* option checked, this image will open without prompting you for a password (because its password has been stored in your account's keychain). If instead you want the system to ask for a password whenever you mount the disk image (as you might should someone else have access to your Mac), then you ought to uncheck this option.

The workflow could end here, with



Creating encrypted disk images with Disk Utility is cumbersome. Thankfully, with an Automator workflow, you can secure documents in an instant.

your new encrypted archive. But chances are good that you don't want an unencrypted version of the folder sitting around on your Mac. That's where the workflow's 'variable' actions come in.

The first one gives Automator a designation for the folder you drag onto the application workflow—sourceFolder, in this case. The 'Get Value of Variable' action says to Automator, "Remember that folder we named sourceFolder? I want the next action to apply to it." Enabling the 'Ignore this action's input' option instructs the workflow to work the

next action's magic (in this case, throwing out the folder we dragged on top of the workflow) only on the item that bears the sourceFolder designation. If you don't enable this option, the workflow will wind up deleting the source folder as well as the encrypted archive.

And that's it. Once you've created an encrypted folder, all you need to do is empty the Trash to get rid of the source folder. If you're going to the trouble of encrypting an archive of this sensitive material, you might wish to choose *Finder → Secure Empty Trash*.

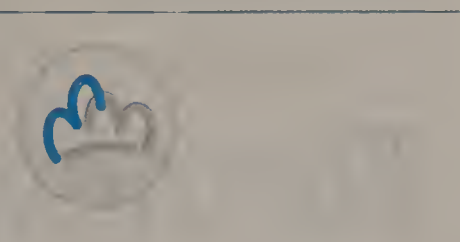


STM Velo 2

STM's \$78 Velo 2 (www.stmbags.com) is an exceptional messenger bag with all the regular stuff (durable materials, plenty of padding), plus clever features that make it stand out. Take, for example, the shoulder strap, which is attached to the bag with a 360-degree swivel joint so it never gets tangled. The back of the Velo 2 features stabilizing waist straps and a small loop near the top handle, while the bottom includes a loop for bike lights—a nice touch.

There is zero wasted space. Both side straps are actually long zippered compartments that expand slightly to hold umbrellas or water bottles. Behind the left shoulder strap, you'll notice a zipper where the laptop compartment is tucked away. It's extremely well padded and lined with a soft fleece, and it has a removable foam liner along the bottom. Most bags feature a dedicated laptop compartment, but having it in a somewhat hidden location is a bonus.

The Velo 2 is available in small or medium size, ready to hold a 13- or 15-inch laptop, respectively. The bag is made with 300-denier polyester on the exterior and 200-denier water-resistant polyester on the interior, and it comes in blue, gray, or black.—AMBER BOUMAN



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Reviews

Hardware and Software for All Your Business Needs



Hardware

Buffalo DriveStation DDR

★★★★; \$180; Buffalo Technologies;
www.buffalotech.com

In the DriveStation DDR (HD-GD2.0U3), Buffalo offers the large storage capacity of a hard drive plus speeds rivaling those of a solid-state drive. It accomplishes this feat by pairing a 2TB hard drive with a 1GB DDR3 RAM cache.

After Macworld Lab clocked the write speed at a swift 225.6 MBps, we removed the hard drive from the enclosure to test it without the cache, and got a speed of 178.1 MBps. This means the cache provided a 27 percent speed boost. In write speed, the DriveStation DDR outperformed comparable USB 3.0 drives such as CalDigit's 3TB AV Pro and Seagate's 1TB Backup Plus.

However, in repeated tests file-read speeds slowed, from 180.4 MBps to 150.1 MBps, a

decrease of nearly 17 percent. Results stayed consistent when we attached the RAM cache to a test SSD: Write speeds increased and read speeds decreased. So while writing files to the drive is faster with the RAM cache, accessing data from the drive is not.

Other drawbacks: The device needs its included external power adapter to operate, and it feels flimsy—the side panels bend inward with little force.

Despite its RAM cache, the DriveStation DDR is not as fast as an SSD. But if you don't want to splurge on a high-end SSD, Buffalo's product is worth consideration.—JEFF SANDSTOE

Matias Laptop Pro

★★★★; \$170; Matias; matias.ca

Matias has long been known for its excellent Tactile Pro and Quiet Pro keyboards. Both kinds, however, are thick, wide, and heavy, and require tethering via USB. The Laptop Pro is notably smaller and connects over Bluetooth. Even so, at its heart, it's still a Matias keyboard, with a full complement of keys, mechanical key switches, and a chunky design.

Measuring 13.2 inches wide by 6.5 inches deep, and 1.4 inches at its thickest point, the nearly 2-pound Laptop Pro is really a desktop keyboard. Two feet let you raise the back edge three-quarters of an inch, but as the keys already angle slightly upward, front to back, few people will need the extra tilt.

The keys have a nice, tactile feel, but require fairly significant effort to press. While many compact keyboards omit most of the keys to the right of <Return>, the Laptop Pro preserves some. The arrow keys are full-size, too. Another nice touch is that <Page Up>

and <Page Down> serve as <Home> and <End>, respectively, when you use them with <fn>. My one layout beef is the location of <fn>, nestled against the up-arrow and right-arrow keys; I frequently hit <fn> when I was trying to press an arrow.

Though its name implies portable use, the Laptop Pro is for anyone—laptop or desktop user—who loves old-school keyboards but doesn't want to sacrifice a swath of desk space to use one.—DAN FRANKS

Software

Face2Face 1.1

★★★★; Free; ChungwaSoft;
www.chungwasoft.com

For many people, email feels a little impersonal. Sometimes it helps to put a face to a message, and ChungwaSoft is offering to assist in that regard with its Face2Face 1.1 plug-in for OS X's Mail application.

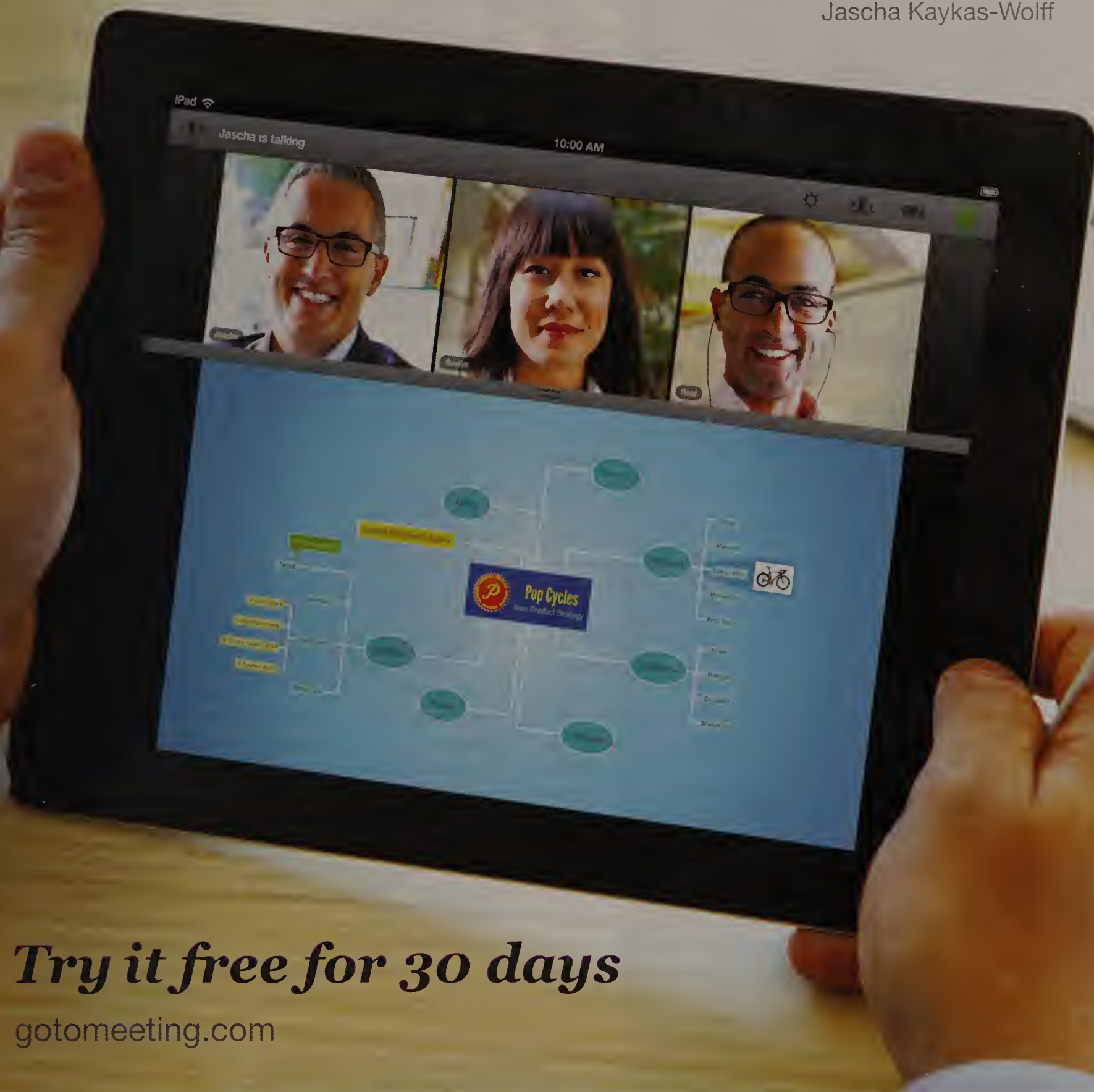
Mail displays a contact's image next to messages from that person, but it does so only if you add such images to Mail manually in the first place. Once

Matias Laptop Pro



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Mindjet CMO
Jascha Kaykas-Wolff



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you install Face2Face, it can automatically show images for many of your contacts by checking services such as Facebook, Gravatar (the “globally recognized avatar” service that’s popular on WordPress blogs), commenting services, and forums.

As long as Face2Face can match the sender’s email address with an image from one of those services, you’ll see the image appear next to messages in the default view, and in the header on individual messages if you opt to use Mail’s Classic View.

You can also define, on a per-address basis, your own images for Face2Face to display to other users of the plug-in. You can set your best headshot for your work address, for example, and let your hair down in the image for your personal address.

Face2Face is free, so it couldn’t hurt to add personality to Mail.—DAVID CHARTIER

NoteSuite

⬆⬆⬆⬆⬆ (iPad) ⬆⬆⬆⬆⬆ (Mac); \$5 (iPad), \$10 (Mac); Theory.io; www.notesuite.io

NoteSuite represents a major upgrade (and a name change) for Projectbook, an iPad-only note-taking app released last year. Not only is the upgrade free for Projectbook owners, but it is also accompanied by a long-awaited desktop app

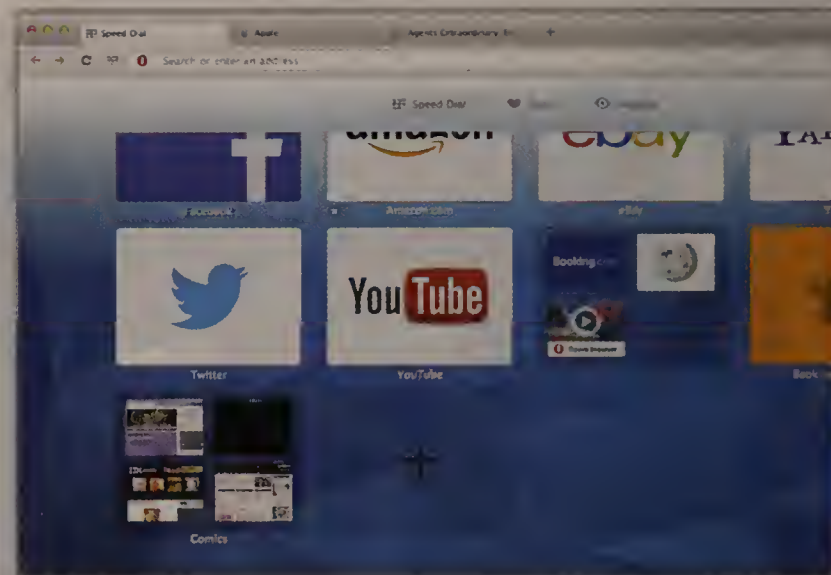
of the same name, available in the Mac App Store.

Designed to be a one-stop project-management tool, NoteSuite has lots of advanced capabilities. For example, while you’re taking notes, you might also be compiling a to-do list. You can split tasks into sub-tasks, delegate tasks, assign due dates, and add tasks to the built-in Calendar app. You can also record audio, add graphics, and insert Word documents, PowerPoint slides, and PDFs. The iPad app gives you several ways to do so; the desktop app lets you drag items in.

The new Web-clipper tool is useful. You can convert Web clippings and imported documents into PDF files that you can then annotate. But you can convert a note to PDF and/or annotate it only on the iPad—the Mac app can merely export a note as a PDF. The PDF conversion generally works well, but certain webpages I tried did not convert accurately.

NoteSuite stores your data on your Mac or iPad, but uses iCloud to sync. You can also link it to Box, Dropbox, and Google Drive, as well as to Instapaper or Pocket to bring in content.

Despite a few quirks, NoteSuite is a solid update, and now that the app is available on the Mac, it’s worth a second look.—BRIAN BEAM



Opera 15 for Mac

⬆⬆⬆⬆⬆; Free; Opera Software; www.opera.com

By replacing its home-brewed rendering engine with a mélange of Chromium and WebKit, Opera is now better at keeping pace with competing Web browsers—but it also feels bland and anonymous.

In Opera 15’s Speed Dial, the palette of favored pages that appears when you open a new tab, it’s easier than ever to reshuffle pages or combine them into groups. A heart icon (the Stash feature) in the new combined URL and search bar lets you save a page in Speed Dial for later reading—a more visually appealing version of Safari’s Reading List. And a Discover option under Speed Dial summons a customizable

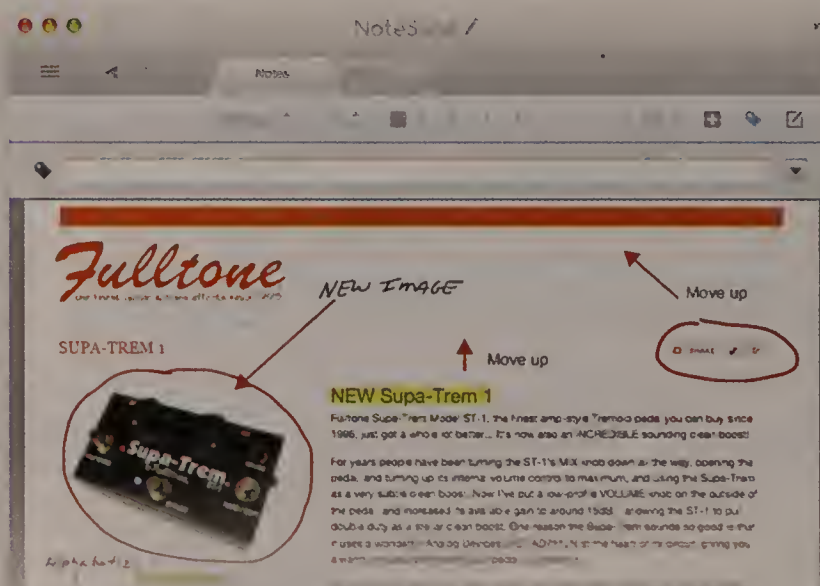
array of recent news stories.

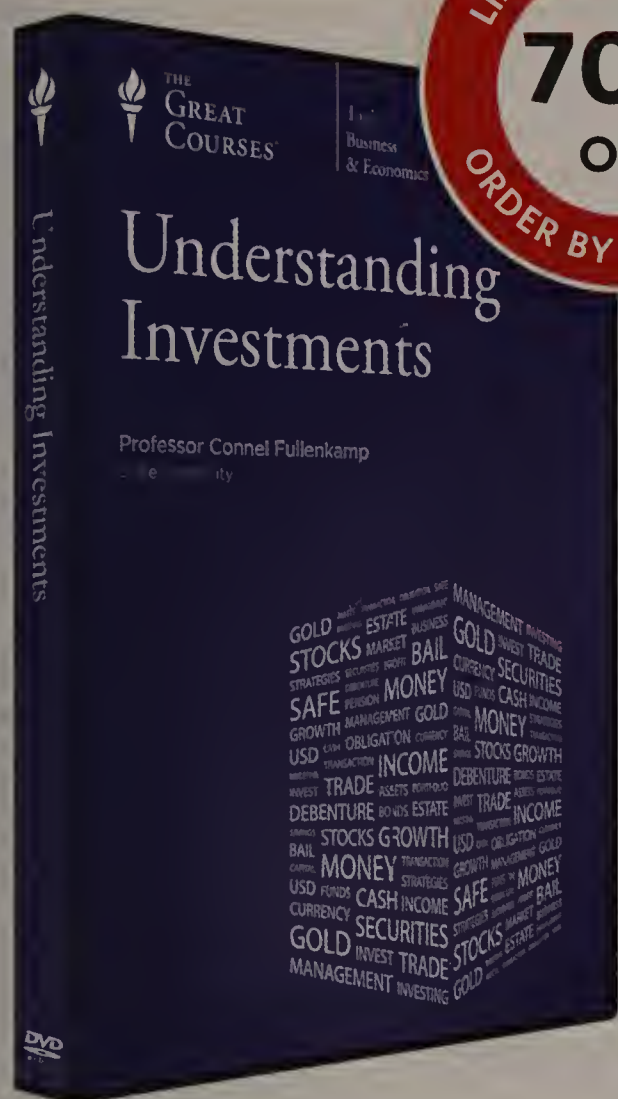
For every new feature Opera has gained, however, it has lost a bit of its spark. The bookmarks bar, for example, is gone. Instead, Opera 15 forces you to browse bookmarks via Speed Dial—and only after you have moved them there using a Bookmark Importer tool.

When tested against Opera 12 and the latest Chrome, Firefox, and Safari, Opera 15 bested only Firefox in HTML5 vector graphics. It scored far closer to its rivals in HTML5 bitmap graphics, but still came in third. It placed second to last in HTML5 text rendering. In all three categories, Opera 15 lagged Opera 12, in one case by nearly 50 percent.

Opera 15 acquitted itself much better in JavaScript benchmarks, beating all comers in SunSpider and placing a close second behind Chrome in Google’s Octane. In HTML5 standards compliance, Opera 15 again scored second to Chrome, and it improved over Opera 12 by more than 20 points out of 500.

I miss having Opera as a quirky, delightful beacon of individuality, but its performance has improved, and it’s still very capable.—NATHAN ALDERMAN





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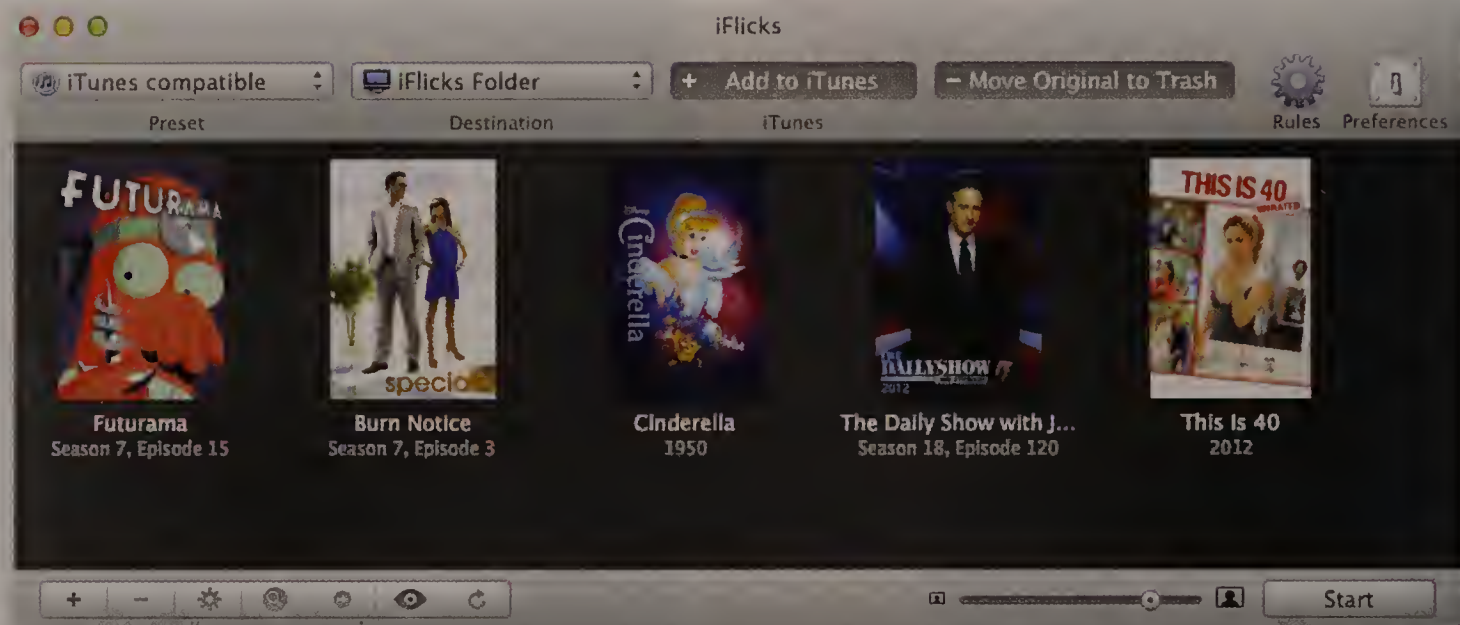
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Playlist

Everything You Need to Know About iPods, iTunes, and Mac-Based Entertainment



Metadata Help
iFlicks looks up metadata online to help you properly tag movies and TV shows.

Apps for Bending iTunes to Your Will

A quick look at five essential tools that every iTunes user should have.

BY JONATHAN SEFF

If you use iTunes regularly, you've probably experienced a litany of frustrations with the software—and accumulated a list of “I wish it did this” items. Here are five tools that will help you bend iTunes to your will.

1. TuneSpan When it consisted of music albums encoded as 128-kbps MP3 files, your iTunes library was probably a manageable size. But add in TV shows, movies, home videos, and Apple Lossless CD rips, and even the mightiest of hard drives can start to get cramped. My iTunes library, for example, has ballooned to 400GB.

So what's the solution? You could buy a big external drive and move your entire iTunes folder to it, to handle current and future content. But that can be a complicated process, and you might not want to opt for the all-or-nothing approach. For me, the \$15 TuneSpan (go.macworld.com/

tunespan) from Random Applications is the way to go. With it, you can relocate (span) content to multiple hard drives to free up space on your main drive, while continuing to see, play, and sync everything in iTunes as you normally would.

2. HandBrake For murky legal issues, iTunes can't rip your purchased DVDs to copy to your iOS devices or play on your Apple TV—nor do I expect that it will ever be able to. But many third-party apps can, and the free HandBrake (go.macworld.com/handbrake) is at the top of my list of apps for such purposes.

With HandBrake you can pull movies and TV shows off the DVDs you've bought over the years and convert them to a format suitable for your Apple devices, at the same time including subtitles/closed-captioning data or removing unwanted audio tracks, say, in the process.

3. iFlicks Once you've ripped your DVDs, you're left with beautiful files—and absolutely no tagging metadata to help iTunes sort and display them properly.

For fixing that problem, a tagging utility is a must. (They are also very useful if you record TV shows from free, over-the-air signals using an EyeTV-type device.) My favorite tagging utility is Jendrik Bertram's \$20 iFlicks (go.macworld.com/iflicks).

This iFlicks app looks up metadata from online TV-show and movie databases and can add useful tags such as TV-show episode names, seasons, and episode numbers; movie release dates; directors and descriptions; and cover art to your files. iFlicks is also a video transcoding app that can convert files from one format to another to make smaller versions of big files, or to turn non-iTunes-compatible videos into Apple-friendly ones (for example).

4. Everything on Doug's AppleScripts for iTunes

If you've tried but failed to do something in iTunes—or if iTunes handles the task at a less-than-stellar level—there's a good chance that Doug's AppleScripts for iTunes (go.macworld.com/doug) has what you're looking for. The site offers almost 450 incredibly useful AppleScripts that perform cool actions within iTunes to make your life easier.

You can view the newest or the most-popular scripts on the site, browse by category, or search for something you're looking for. Here are some of my favorite AppleScripts from Doug's:

Remove n Characters From Front or Back lets you delete a number of characters from the beginning or the end of the Song Name, Album, Artist, Comments, Composer, or Show tag. If you have lots of tracks that include the track number as part of the name, this script can clean them up in no time.

Albumize Selection rennumbers the track number for songs to their current play order, and can also change the album name for the tracks at the same time.

Copy Tag Info Tracks to Tracks is very useful if you decide to rerep CDs in a different format or at a higher bit rate and want to retain your finely crafted meta-

data. With this AppleScript, you can copy selected tags from the old files to the new ones, overwriting any tags the new ones have with your personalized data.

Dupin and Dupin Lite do a much better job than iTunes' built-in Show Duplicate Items command of finding and zapping duplicate files, letting you easily tame overflowing libraries.

5. X Lossless Decoder

iTunes supports many different audio formats now, but some still force it to surrender. For example, Apple created its own lossless audio format—Apple Lossless—but it omitted support for the widely used, open-source FLAC (Free Lossless Audio Codec) format.

If you come across FLAC, Ogg Vorbis, Monkey's Audio (.ape), Shorten (.shn), or Wavpack (.wv) files that you want to get into iTunes, download tmkk's free X Lossless Decoder, aka XLD (go.macworld.com/xld). It can change to and from a number of audio formats, and is especially helpful with converting lossless and high-resolution audio files.

You can even use it to rip your CDs better, verifying ripped tracks against an Internet database so you can be sure that the resulting files are bit-perfect copies of the music on your CDs.



Roku App Allows iOS Devices to Beam Videos

BY JONATHAN SEFF

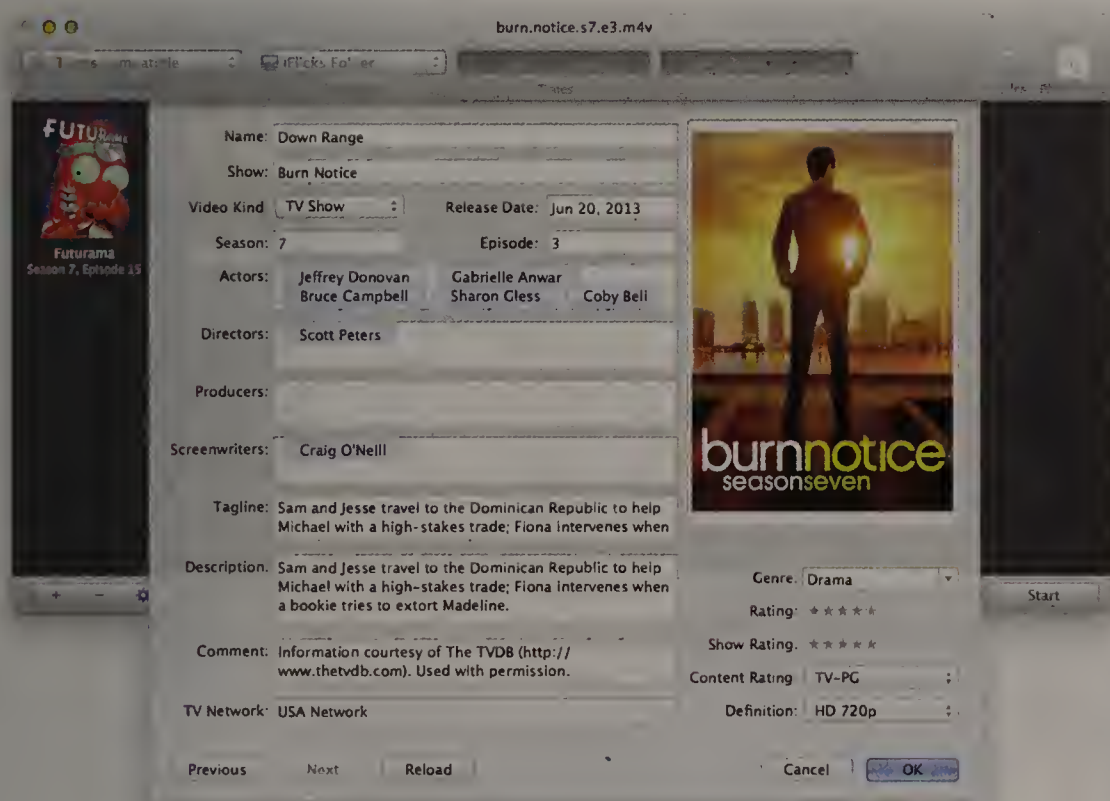
Roku has moved a step closer to Apple's AirPlay abilities with a cool new trick in the latest version of its iOS app.

The 2.3 update expands on the "Play on Roku" feature that the company introduced back in September 2012. That feature enabled users to stream music and display photos from their iOS or Android device on their TV via a Roku device. Now, the company has added video to the mix, making it possible to stream videos in your iOS device's Camera Roll.

That means you can play anything you've shot with your iOS device—family ballet recitals and 15-second Instagram video masterpieces, say—but not TV shows or movies you've synced with your iPhone. Which makes it somewhat less useful than the Apple TV's AirPlay streaming, but still a pretty cool addition.

I tried out the new feature with a Roku 3—Roku 2, 3, LT, HD, and Streaming Stick models support the new capability—and it worked as expected. I just launched the app, tapped the *Play on Roku* button, and tapped *Video* at the bottom of the list. From there, I was presented with Instagram and Camera Roll folders to choose from. I picked a video to play, and after a brief "Exporting" notification, the video played on the HDTV in our offices, as clear as day.

Think of it as a new Roku video channel for your home movies.



All the Stats iFlicks can add tags such as cover art, episode names, and more to your shows.

Ask the iTunes Guy

Using workarounds to solve some of iTunes' problems.

BY KIRK McELHEARN

Q&A

This month's column deals with solutions to problems that use little-known features of iTunes or third-party software. The questions this time can be solved only with a workaround, or by using iTunes in a way it's not designed to work.

Q: I have tracks on a CD that, when ripped with iTunes, have skips and clicks. Is there any way I can fix this?

A: It's possible that there's a problem with the CD itself; you can test it by playing it on a CD player. If it plays correctly, then



the CD is fine, and your computer is just having trouble ripping it. In that case, however, there's an interesting workaround that may get you clean audio files.

Insert the CD in your Mac's drive, and double-click its icons in the Finder. You'll

see a number of icons for audio files, one per track. Drag the files (tracks) that won't rip correctly to a folder on your desktop; this will create uncompressed AIFF files.

Next, create a new, empty playlist in iTunes, and drag the files to that playlist. Listen to them, and see if they have the same errors; if not, you can use them. You'll need to tag the files—add information for album, artist, and track numbers—before converting them using iTunes. Select the files, and then right-click and then choose *Create file format Version*, where *file format* is the import format you've selected in iTunes' General preferences. When the conversion is done, delete the AIFF files.

Q: I would like to filter songs by genre, but many songs could fit in multiple genres. Is there a way to assign more than one genre to a particular song?

A: Unfortunately no, and I really think that iTunes should offer both genres and sub-

ILLUSTRATION BY MICHAEL SLACK

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genres. There are a couple of work-arounds I can suggest here, however.

The first is to create your own genres that contain subgenres. If you type a genre name in the Genre field, iTunes will create it. So, in place of Rock, you might create genres like *Rock - Folk*, and *Rock - Pop*. This still limits you to one level of subgenre, though you could create genres such as *Rock - Pop - 1960s*.

The second workaround uses the Comments tag. You can enter any text you wish in this tag, such as the name of a secondary genre. You can then create smart playlists that look for keywords in this field. To do so, select one or more songs, and press \mathbb{H} -I. Click *Info*, enter your text in the Comments field, and then click *OK*. Note that if you already have text in that field, entering text in this way will overwrite the existing text, and you'll need to edit each song individually if the songs have different comments. Then you can create smart playlists that look at

Multiple Item Information

info Video Sorting Options

Artist: Grateful Dead

Album Artist:

Album: American Beauty

Grouping:

Composer:

Comments: ☒ Rock ☐ Folk ☐ Acoustic

Genre: Dead

Year: 1970

Track Number: of

Disc Number: of

BPM:

Artwork:

Rating:

Add Multiple Genres

Enter names of secondary genres using the Comments field.

the text in the Comment field and combine them in whatever ways you want.

Q: I have several cases where an artist has released multiple albums with the same name. Is there a way to stop iTunes from merging these into one?

A: Alas, no. The only workaround in this situation is to cheat in the album tag. For example, I have three albums by Peter Gabriel, each named *Peter Gabriel*. In the appropriate album tags, I entered *Peter Gabriel 1* (aka *Car*), *Peter Gabriel 2* (aka *Scratch*), and *Peter Gabriel 3* (aka *Melt*).

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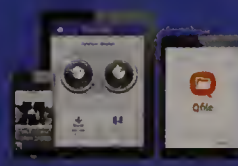
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Where to buy



www.qnap.com

by Eric Grandy

SONGS	ALBUM	⌚	ARTIST	
Your Drums, Your Love	Body Music	3:39	AlunaGeorge	Free
4:30am	Stranger Than Fiction	2:46	Kevin Gates	Free
Sun Medallion	Was Dead	2:30	King Tuff	Free
FOUR TEETH	Circumambulation	6:16	True Widow	Free
Do It Do It Disco	Broadway	4:49	Myron & E	Free
Our Father	The Night's Gambit	3:12	Ka	Free
A Cold Embrace	Tend No Wounds	1:55	Black Tusk	Free
Mega Tubes	Moon Hooch	4:15	Moon Hooch	Free
Diablo (Sabo's Moombahton Remix)	Karimba Diabolic Remixes	5:19	Novalima	Free
Oubliette	Jinx	5:02	Weekend	Free
Driving East, And Through Her	This Is Another Life	4:37	Case Studies	Free
Innocent Persecution	Bun Dem Riddim	3:30	Dreadsquad & Blackout JA	Free

Free Sample Google Play's monthly Antenna sampler features music from new artists.

Other Sites

You can find free music in many other places besides online music stores. Artists' websites, for example, often provide free downloads to help you get to know them. But that's just the beginning.

The online incarnation of *Rolling Stone* (go.macworld.com/rstone) offers a free song every day of the week. And NPR Music Downloads (go.macworld.com/npr) has some concerts and music podcasts that you can download.

NoiseTrade (noisetrade.com) makes free songs available from a wide cross-section of small/unknown artists. You'll find other small bands on Artist Direct (go.macworld.com/artdir), Free Music Archive (freemusicarchive.org), Jamendo (jamendo.com), and Last.fm's Free Music Downloads (go.macworld.com/lastfm).

Live Music

For fans of live music, now is a great time to be alive. Instead of snail-mail trades of cassettes or CDs, you can freely download new and vintage recordings.

The Internet Archive's Live Music Archive (go.macworld.com/lma) had, at last count, 118,340 items. There, you'll find music from such varied artists as The Grateful Dead, Smashing Pumpkins, John Mayer, and Maroon 5. Most shows are audience recordings, but it has sound-board recordings as well. You'll also find live-music downloads on BitTorrent trackers such as bt.etree.org, Dime (dimeadozen.org), and The Trader's Den (thetradersden.org). If there's a band you like, there's a good chance you'll find a recording of it at one of the above sites.



On Display The iTunes Store features a free single of the week for downloading.

Where to Go to Download Free Music

BY JONATHAN SEFF

For scofflaws, there are innumerable places to illegally download music. But free music is available from a number of legitimate sources, too, if you know where to look.

Online Music Stores

Apple and Amazon will sell you any of their millions of songs or albums at the click of a button. But they also offer various freebies. iTunes, for example, prominently features a free single of the week on the main and music sections of the iTunes Store. Apple also has a page on the iTunes Store with all free iTunes content at any given moment, including music. If you install the free Star-

bucks iOS app, you can download a free Pick of the Week directly from your mobile device. And iTunes' trove of music podcasts provides daily or weekly downloads.

Amazon MP3 has pages for free songs (go.macworld.com/single), free albums (go.macworld.com/album)—mostly samplers from indie labels—and music from “rising stars.” Much of it is stuff you’ve never heard of, but you’ll find tracks from the likes of Blondie, She & Him, and The National, as well as classical tracks and kids’ music.

Google Play has a free music page (go.macworld.com/gplay) and a monthly Antenna music sampler from up-and-comers, with 12 tracks for August, for example.

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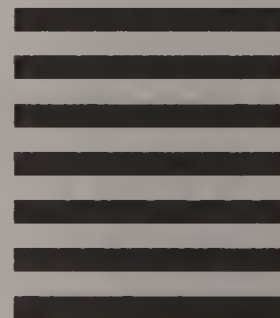
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Watch the Passage of Time

Travel thorough time with these ten movies.

BY JEFFREY M. ANDERSON



These ten movies, streaming on Netflix, deal with aging, generation gaps, or looking forward or backward in time.

56 Up

Filmmaker Michael Apted worked on the 1964 production *7 Up*, which interviewed seven-year-old kids about life. In 1970 he interviewed them again—and in 1977, 1984, 1991, 1998, and 2005. Most recently (in 2012), *56 Up* arrived, the newest entry in a most extraordinary documentary series.

The Expendables 2

In its own explosive way, *The Expendables 2* (2012) tackles themes of aging. It presupposes that viewers are familiar with the screen personalities of the actors, as it plays around with them, making jokes about their ages and experiences. It's a vast improvement on the lame first movie.

Detective Dee and the Mystery of the Phantom Flame

Detective Dee is based on a real figure, immortalized in print in the 18th century. Hong Kong filmmaker Tsui Hark is also a legend. But though he's gifted at beautiful filmmaking, he's not so good with convoluted plots, and the film (2010) is a bit hard to follow. Happily, it looks spectacular.

The Bay

Barry Levinson's *The Bay* (2012) is a vicious, cautionary tale. Shot like "found footage" horror movies, the movie takes

place in Chesapeake Bay, where people begin getting sick. Soon it's revealed that a series of man-made conditions combined to create deadly super-parasites.

Starlet

Generation gaps collide in *Starlet* (2012). Dree Hemingway stars as a young actress. She buys a thermos from an old lady, finds that it's full of money, and faces a crisis of conscience. She befriends the lady, and the movie focuses on their friendship—a funny and surprising relationship.

The Sweeney

The silly-sounding name belies a tough cop movie. The Sweeney squad of the London police uses unorthodox methods to get results, but it comes under investigation. *The Sweeney* (2012) is based on a British TV series from the 1970s.

Benny & Joon

Going back 20 years, Johnny Depp played a Buster Keaton-obsessed oddball in *Benny & Joon* (1993), a strange comedy-romance. The movie is bittersweet but not an unpleasant.

Mother

Debbie Reynolds plays the title role in *Mother* (1996). When her son—an unemployed writer—moves back

Starlet Experience the collision of two different generations in this film that explores the bonds of friendship.

home with her, their tense relationship forms the basis of the humor in the movie.

Richard III

Actor Ian McKellen brought the role of Richard III to the screen in *Richard III* (1995), one of the best of all movie adaptations of Shakespeare. The movie sets the events in the 1930s, using World War II imagery.

The House I Live In

Filmmaker Eugene Jarecki goes back to his childhood in this film (2012) and interviews his housekeeper. Her answers inspire him to probe into the country's "War on Drugs," and the results he finds are shocking. But Jarecki's approach to the subject is thoughtful rather than outraged.



The Expendables 2 This installment is much better than the first one, and it delivers an explosive good time.

ROUNDUP: Four Noise-Canceling Headphones

BY JIM METZENDORF



UE 9000



ATH-ANC9

Audio-Technica ATH-ANC9 QuietPoint Active

A unique feature of the ATH-ANC9 QuietPoint Active headphones is that it offers three modes of noise-canceling operation. Mode 1 is meant for use during airplane, train, or bus travel. Mode 2 is intended for use in noisy offices or crowded environments; and Mode 3 aims to enhance quiet environments.

I found the ANC9's noise-canceling circuitry very effective in my tests, and the different modes of operation worked as claimed. The ANC9 offers good sound for a noise-canceling headphone set, and it's light and comfortable.

A single AAA battery powers the ANC9. You can

use it without power, but then you lose the noise-canceling functionality. The bad news is that it sounds significantly different when unpowered.

Bose QuietComfort 15

The QuietComfort 15 is Bose's flagship circumaural model.

"Unassuming" describes its appearance best. Since Bose designed and built the headphones to be lightweight and compact, the QuietComfort 15 isn't as stylish or sturdy as some other models here.

Its ability to reduce external noise creates an almost disorienting experience. The overall sound quality is very good for a noise-canceling design, with no part of the frequency range significantly lacking or too prominent.

The QuietComfort 15 aims for maximum portability. Like the ATH-ANC9, it gets its power from a single AAA battery. But if that battery dies, you can't use the headphones.

Logitech UE 9000

The UE 9000, Logitech's top-of-the-line full-size headphone, is the most expensive model in this roundup. It's also the most versatile: In addition to offering a (detachable) wired connection to your audio source, it provides

Bluetooth connectivity and active noise cancellation.

An internal battery, charged via USB, powers the headphones. If the battery dies, you can still use the UE 9000 as standard headphones.

The UE 9000's build quality is excellent, and though it's a little heavy, it's still quite comfortable. Unfortunately its noise-canceling circuitry was only moderately effective in my tests, and the audio quality isn't well-balanced: High frequencies sound dull, and bass response is muddy. Overall, this model finished behind the Bose and the Audio-Technica—a disappointment at its price.

Polk Ultra Focus 8000

The Ultra Focus 8000 is Polk's top-of-the-line model, and it's



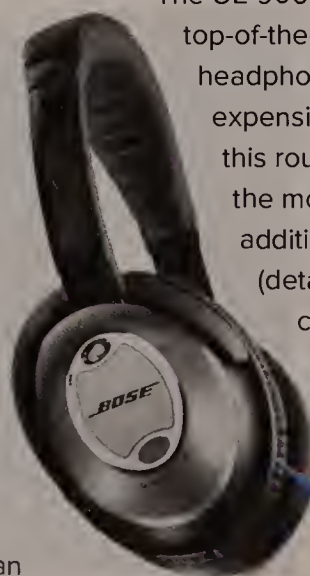
Ultra Focus 8000

ruggedly built, with large earpieces, a thick headband, and earpads that contribute to a very comfortable fit.

The Ultra Focus 8000's noise-canceling circuitry works reasonably well, though it's not nearly as effective as that of the Audio-Technica and Bose models. Sound quality is good, but bass heavy. The Ultra Focus 8000 uses two AAA batteries, but it doesn't work as a standard headphone set when unpowered.

Bottom Line

Bose's QuietComfort 15 reigns supreme in noise-canceling performance and sound quality. I rank Audio-Technica's ATH-ANC9 second overall, though I really like its multiple cancellation modes and its ability to function without battery power. Logitech's UE 9000 is appealing if you're interested in having Bluetooth capability when off the plane, but you'll sacrifice audio and noise-canceling performance in the bargain.



Quiet Comfort 15

Noise-Canceling Headphones At-a-Glance

PRODUCT	RATING	PRICE	URL
Audio-Technica ATH-ANC9 QuietPoint Active	★★★★	\$350	audio-technica.com
Bose QuietComfort 15	★★★★½	\$300	bose.com
Logitech UE 9000	★★★½	\$400	ue.logitech.com
Polk Ultra Focus 8000	★★★	\$300	polkaudio.com

Reviews

Home Entertainment Hardware, Software, and Accessories



Hardware

Chromecast

★★★★; \$35; Google; google.com

The Chromecast is a dongle that plugs into an HDMI port, receives power from USB, and acts like a Chrome browser, which allows it to play movies, music, and photos on your HDTV. You control it from any Android or iOS device, a Mac or Windows PC, or a Chromebook.

The Chromecast costs \$35, compared with \$99 for Apple TV. To get Chromecast's 1080p playback, however, you need to buy, at a minimum, the \$80 Roku 2 XD.

The software you use to control the Chromecast consists of familiar names: Chrome, Netflix, YouTube, and the Google Play Movies & TV and Play Music.

"Casting" a tab from Chrome requires a Google Cast extension, which adds the Chromecast button to your toolbar. Once you tell Chromecast what you'd like to watch, it gets the material on the Internet—your device isn't involved in streaming at all. As a result, you can open a second app on the phone, or another browser tab on your laptop. The playback isn't synced exactly, however, and the Chromecast lags behind your computer by a couple of seconds.

The Chromecast's support for content from the Google Play store makes it a no-brainer if you're invested in that ecosystem. Its cross-platform support is helpful. And its price almost qualifies it as an impulse buy.—SUSIE OCHS



Belkin Dyle Mobile TV

★★; \$100; Belkin; belkin.com

Belkin's Dyle Mobile TV is a TV antenna that works with an iOS device. With the Dyle iOS app installed, you can watch TV on an iPad or iPhone—but only under certain limited conditions.

Before investing in it, check to see if you are in Dyle's coverage area. The antenna uses ATSC-MH, a mobile video broadcast signal available in fewer than 40 U.S. metropolitan areas. Another big limitation is the measly number of channels the Mobile TV offers.

Video quality looks acceptable on the iPhone, but it's pixelated on the iPad.

The Dyle FAQ says that the service will be "available with no subscription fee through the end of 2013," which means it's possible that Dyle may charge for its services next year. Will people be willing to pay for a service with such severe limitations? I'm not.—ROMAN LOYOLA



Logitech UE 4000 and UE 6000

★★★★½; \$100 (UE 4000); ★★★★★; \$200 (UE 6000); Logitech; logitech.com

The UE 4000 is the only on-ear hardware in Logitech's lineup; the UE 6000 is a full-size, closed, over-the-ear model.

The UE 4000 has a clean, modern design, and its plastic construction keeps its weight down. The ear pads cushion well, even though the headband exerts enough pressure to seal out external sound.

The sound signature displays an emphasis at the lower frequencies, and a rolling off

at the high end. Out of the box, the UE 4000's bass response is also seriously fortified. But peeking through the bass is a very smooth midrange and a detailed high end. It's just too bad the bass so thoroughly overwhelms the rest of the audio spectrum.

Meanwhile, the UE 6000's attractive design complements its noise-cancellation circuitry. But this feature is quite subtle. If noise cancellation is a priority, you may be disappointed.

The highs are smooth, and the midrange is nicely nuanced; but as with the UE 4000, they are buried beneath the emphasized bass. The soundstage is good, perhaps a bit better than average in this price range.

The UE 4000 is stylish and produces high-quality sound. For its part, the UE 6000 isn't especially effective at noise cancellation, but it does enhance the dynamic range very nicely.—TONY SILVA

iPods: Current Lineup

PRODUCT	SPECS	RATING	PRICE ¹	DISPLAY	MORE INFO
 iPod Classic	160GB	★★★★	\$249	2.5-inch color	go.macworld.com/classic2
 iPod Touch 5th Generation	16GB	★★★★	\$229	4-inch color (Retina)	go.macworld.com/touch516
	32GB	★★★★½	\$299	4-inch color (Retina)	go.macworld.com/touch5
	64GB	★★★★½	\$399	4-inch color (Retina)	go.macworld.com/touch5
 iPod Nano	16GB	★★★★	\$149	2.5-inch color	go.macworld.com/nano7
 iPod Shuffle	2GB	★★★★	\$49	None	go.macworld.com/shuffle4

¹All prices are Apple's prices.

Create

Using the Web for Video, Graphics, Publishing, Photography, and Other Creative Pursuits

Photoshop Touch Powers Mobile Image Editing

Adobe's mobile software gives iPhones and iPads hard-core Photoshop capabilities.

BY JACKIE DOVE



Review

RATING
★★★★½

PRICE
\$10 (tablet version),
\$5 (smartphone version)

COMPANY
Adobe

URL
adobe.com

If you're already a Photoshop user, then you're halfway to making Adobe's Photoshop Touch (go.macworld.com/pstouch) part of your mobile arsenal. But if you're interested in Photoshop Touch primarily for

sharing images on social networks, a simpler image-editing app—such as Camera Awesome, Instagram, Snapseed, or Adobe's Photoshop Express—may be a better fit.

Available for the iPhone and iPad, Photoshop Touch is a full-service photo-editing app. It's most useful when you need to do heavy lifting on one of those devices.

Two Versions, Both Solid

The \$10 tablet version and the \$5 phone version have the same mobile controls, though finding them on the latter can take a while. The versions differ mainly in their use of available screen real estate.

The interface and performance of the app on my iPhone 5 and on my Samsung Galaxy Nexus were identical—and impressive. Except when opening or saving large files, I noticed very little lag time on any of the devices I worked on, including second- and third-generation iPads. I didn't experience a single crash.

The iPad app's short tutorials provide step-by-step instructions on how to accomplish specific goals, and showcase major features. The phone version includes a basic (and abbreviated) help module.

Photoshop Touch supports images of up to 12 megapixels; the number of layers you can create depends on image size. The app lets you crop and resize images, adjust exposure, sharpen, separate foreground from background, and combine images. The Undo control is conveniently located.

Room to View Photoshop Touch for iPad offers a comparatively luxurious amount of screen real estate compared to the iPhone version.

The usual Photoshop adjustments and filters are present: brightness and contrast, color saturation and temperature, noise reduction, transform, and shadow/highlight. Additional, slider-based adjustments are available within these tools. You'll also find Photoshop's curves and levels tools, where you make adjustments via histogram and in separate color channels. You can rotate and flip images, too.

Interface

Photoshop Touch is not terribly hard to learn if you already know Photoshop. But users without Photoshop references may find the path somewhat rough going.

Except when opening or saving large files, I noticed very little lag time on any of the devices I worked on, including second- and third-generation iPads.

When you launch the app and click the Magic Wand button to begin a project, you can get images from various places. Photoshop Touch conveniently worked with all of my camera-phone libraries and hooked directly into my Camera Roll, Instagram, and several other social networking subscription services.

You can also access images saved to your Creative Cloud account, where Photoshop Touch gives you 2GB of space free of charge. You can shoot a photo from within the app itself, or access photos from Facebook and Google.

On the iPad, the interface is limited to landscape orientation. The toolbar along the left side of the app (a facsimile of the desktop version's toolbar) offers plenty of room for maneuvering, but unlabeled interface elements line three sides of your image by default. Inside the menus themselves, every option has a text label.

Toolbar Elements and Menus

Touching the top of the toolbar lets you access Photoshop Touch's major editing tools, and tapping each one reveals its options. The toolbar, though abbreviated, provides such major items from the desktop version's toolbar as the Marquee, Lasso, and Magic Wand selection tools; the Paint and Effects Paint tools; and the Clone, Eraser, Blur, Smudge, and Healing Brush. The Scribble Selection tool is like the old Extract filter, which Adobe has replaced with the Refine Edge tool on the desktop. Photoshop Touch has both the Scribble tool and a Refine Edge control.

Each tool offers further controls and opens its own context-sensitive menu. Brush sliders let you adjust size, hardness, flow, and opacity. The clone stamp has a little source icon.

There's no Move tool, but you can use on-screen gestures instead. There's no Magnetic Lasso tool, but the polygon tool can serve that purpose. You won't find slice tools, content-aware move, patch tools, Dodge and Burn, straightening,



Easy Edits Cropping and resizing images aren't hard, but some icons are unlabeled.

red-eye removal, or a Grabber hand. The tablet version has a Full Screen view, but no editing tools are available in that mode.

Pull-down menus line the top of the screen. The Adjustments and Effects menus cram Photoshop's most frequently used controls into the mobile version. The neat, colorful arrangement of adjustments feels friendly, but it doesn't replicate the desktop version's functionality. The Curves adjustment, for example, lacks presets, but you can manipulate the curve itself. Most adjustments have one or more sliders for altering your results.

The FX menu has a similar layout to the Adjustment menu, with colorful renditions of each available effect, divided into four tabbed categories: Basic, Stylize, Artistic, and Photo. Disappointingly,

Adobe doesn't offer any unique filters here. If you're set on using effects, import your picture onto the desktop and work on it there. Or use Camera Awesome or Instagram to stoke your filter madness.

To zoom out, you place your fingers on the glass and spread them; to shrink, you pinch. Tapping selects an object, depending on the tool; but double-tapping does not automatically enlarge the image to fit into the window. To click and drag an image, you must place two fingers on it.

Room for Improvement

This version of Photoshop Touch is quite impressive, but some issues prevent it from being stellar. Various parts of the app have unlabeled icons, and you have to search Adobe's online documentation

to find out what they mean. Often as I used the app (on all devices), menus on the bottom obscured parts of the image; and when I moved images to edit them, they sometimes changed size as they moved.

Another drawback of this version is that it can't open the large, uncompressed PSDX files it generates (they're designed to be opened in the desktop program). Adobe is working on a fix for the issue.



Friendly Framework Brush adjustments on the iPhone version of Photoshop Touch mirror the controls available on the tablet version.

iPad App Makes Photo Books That Talk

Shutterfly Photo Story offers shutterbugs a free online presence and a paid hard-copy version.

BY JACKIE DOVE

Hands-On

Though Shutterfly has long turned digital files into photo prints—and novelty items from mugs to fleece blankets to photo books—none of those items could talk. Now, an iPad app called Shutterfly Photo Story (go.macworld.com/photostory) lets you create online and hard-copy photo books on your tablet, complete with audio narration.

To use the free Shutterfly app to produce a stylish photo book, just follow the prompts. A manual is there if you need it, but I didn't. Photo Story hard-copy books are available in three sizes and three cover types (soft, hard, and padded).

Decide and Conquer

Shutterfly Photo Story uses images stored on your iPad to compose your book. The opening screen has settings and help icons that walk you through the process.

In the Create panel, you decide on the book's theme (from ten options) and size.

An 8-by-8-inch book costs \$30, an 8-by-11-inch volume is \$40, and a 12-by-12-incher is \$60. The default length of each book is 20 pages. The two smaller books let you add pages for \$1 each; extra pages for the oversize book cost \$1.50 each. The larger the book, the more artistic choices you get for page color, page layout, and background. In addition, each theme offers contextual layout and design options.

You can include up to 500 photos in your book, drawn from social networks like Facebook, Instagram, and Shutterfly. You can use photos residing on your iPad or import photos from your hard drive via iTunes. If you're already a Shutterfly member, you can access all of your previous albums and projects by logging in.

After navigating to the photos you want to use, you can choose specific images to include, or import an entire album into the program and then pick. For a printed book, it helps to do your prep work beforehand.

The Edit menu lets you choose how to populate your pages and whether to add



Commit to Print After choosing a theme and a book size, you can't change your mind; but you can create a new book. Specific layouts apply to different themes, so each book looks distinctive.

pages and audio to your book. The Autofill feature is handy if you took photos in sequence and want to show some of the resulting scenes together. If you place the whole batch, Shutterfly finds duplicates and similar images and doesn't add them.

A blank book displays a menu at the bottom of the screen and lets you choose photos, layouts, backgrounds, or audio.

Drag your image to the open slot to position it, and then tap for options such as special effects, a loupe, and a rotate function. You can also resize and reposition the image in the window. When you're satisfied, tap *Apply* and then *Done*.

The Autofill feature is handy if you took photos in sequence and want to show some of the resulting scenes together.

Text and Audio

You add text directly within the layout's text fields. As you tap a text field, the menu drops down to reveal a choice of fonts, whose color and size you can change. The program doesn't remember your last choice, but reverts to its own default, so you can vary the fonts among pages. A speech-to-text function permits you to add text to the pages.

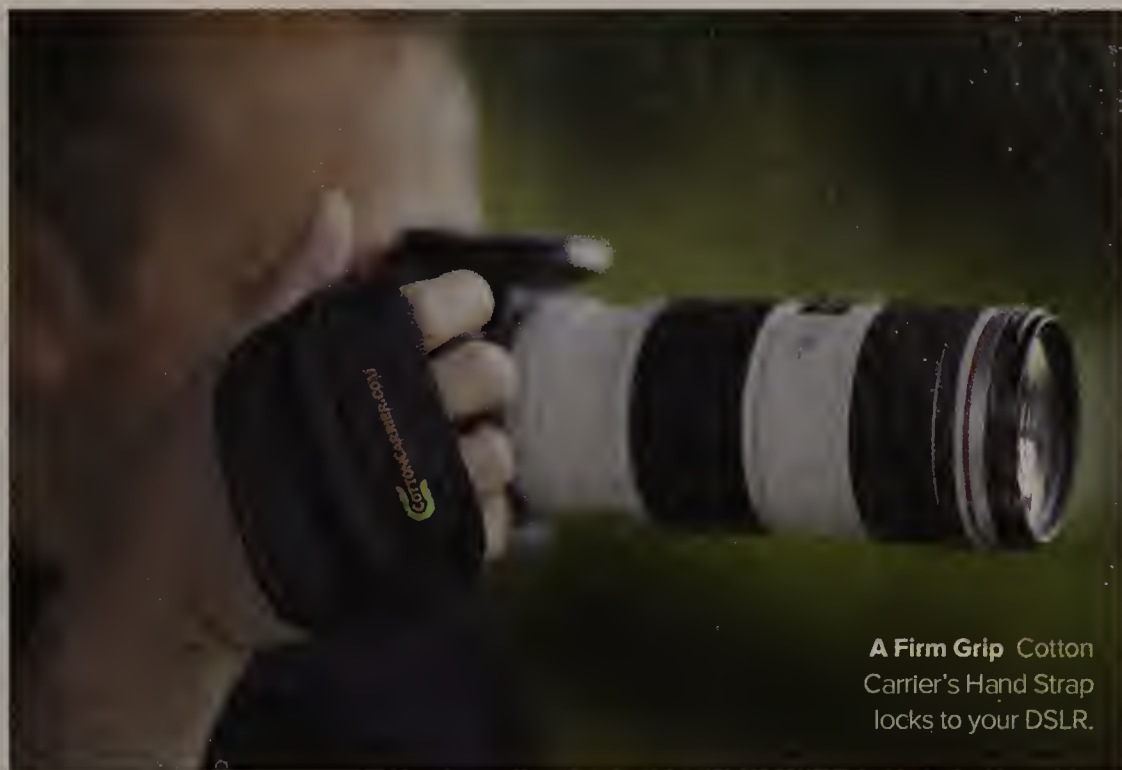
This is where Photo Story differentiates itself from other photo book services: You can record a 30-second clip of narrative for each page of your book. Recordings play back in the app, online, or via a QR code embedded in the printed book. To pick up the audio from print, readers need only download a QR code scanner on their mobile device to use the code.

Besides ordering hard-copy books, you can share your photo book via email or Facebook at no charge. Your viewers don't need to have the app to see your book.

Seven Great Accessories for Smarter Photography

Whatever you shoot with, the right add-ons can make a big difference.

BY JACKIE DOVE



A Firm Grip Cotton Carrier's Hand Strap locks to your DSLR.

Here are some of the coolest items we've found to help you help others see the world through your lens, whether you're taking aim with your smartphone or your DSLR.

Cotton Carrier Hand Strap:

Is your camera so heavy that it makes your hand hurt? Cotton Carrier's Hand Strap (\$20, go.macworld.com/cottoncar) offers a secure, adjustable grip on your DSLR. The heavy-duty Velcro strap lets you tighten or loosen your hand against the camera body, making heavy cameras and lenses more comfortable to hold. The Hand Strap attaches to the camera's base with an Arca-Swiss-style plate.

LensPen DSLR Pro Kit: Fight dust and fingerprints with the three-piece LensPen DSLR Pro Kit (\$35, go.macworld.com/lenspen). The LensPen works on full-size DSLR lenses; the MicroPro is ideal for tiny camera eyepieces; and the FilterKlear is great for lens filters. Each tool comes with a retractable brush on one end to remove dust, and a carbon cleaning tip on the other to scrub fingerprints and smudges.

Cinch camera strap: Comfortable, secure, adjustable, and easy to use, the Cinch (go.macworld.com/cinch) lets you carry your camera on one shoulder or

across your torso for swift camera maneuvering. The Basic Cinch is \$50, or you can get it packaged with the Plate, PodMount, or Membrane Connector for \$60—each is tailored to a different camera size.

Flashpoint Video

Shootskate II Dolly:

With Flashpoint's Video Shootskate II Dolly (left, \$75.50, go.macworld.com/shootskate), you can mount your camera and roll it across a tabletop, or on the ground for dynamic low angles. The polyurethane wheels absorb vibration, and the wheel turrets rotate 270 degrees and lock independently for a wide range of rolling motion. The base plate includes a tripod head mounting screw for attachments. Grip handles on each side give you hands-on mobility.

Photojojo iPad telephoto lens:

When you're shooting with your iPad, the Photojojo iPad telephoto lens (\$25, go.macworld.com/photojojo) gives your tablet telephoto power. The lens has a manual focusing ring to help control

its shallow depth of field. It also adds a bit of vignetting and a lo-fi look. The iPad mini lens has 12X telephoto power; the lens for the iPad 3 and 4 has 10X telephoto power.

Manfrotto Pixi minitripod:

The Pixi minitripod (below, \$28, go.macworld.com/pixi) steadies your camera in tight places to help keep images sharp; it doubles as an ergonomic grip for shooting videos. A mechanism lets you adjust and lock the ball head in a single movement; pushing the button releases the ball joint to move freely so you can position your subject in the frame. The Pixi works with compact cameras, compact interchangeable-lens models, and entry-level DSLRs.

Luxi: Attached to your iPhone's front-facing camera and used with a light meter app, Luxi (\$30, go.macworld.com/luxi), a small diffusion dome, helps you determine the best settings for your DSLR or other camera. As a result, your iPhone becomes an easy, convenient incident-light meter for measuring the amount of light falling on the shot's subject, rather than the amount of light reflected by the subject.



Corel Painter X3 Packs New Features

The 13th version of Corel's fine-art program provides new visual, brush, and painting capabilities.

BY JACKIE DOVE

With Painter X3 (the 13th version of the natural-media software) for Mac and Windows, Corel seeks to augment Painter's position as a leading inspirational tool for work in photographic and traditional art, illustration, manga and comic art, conceptual art, and design.

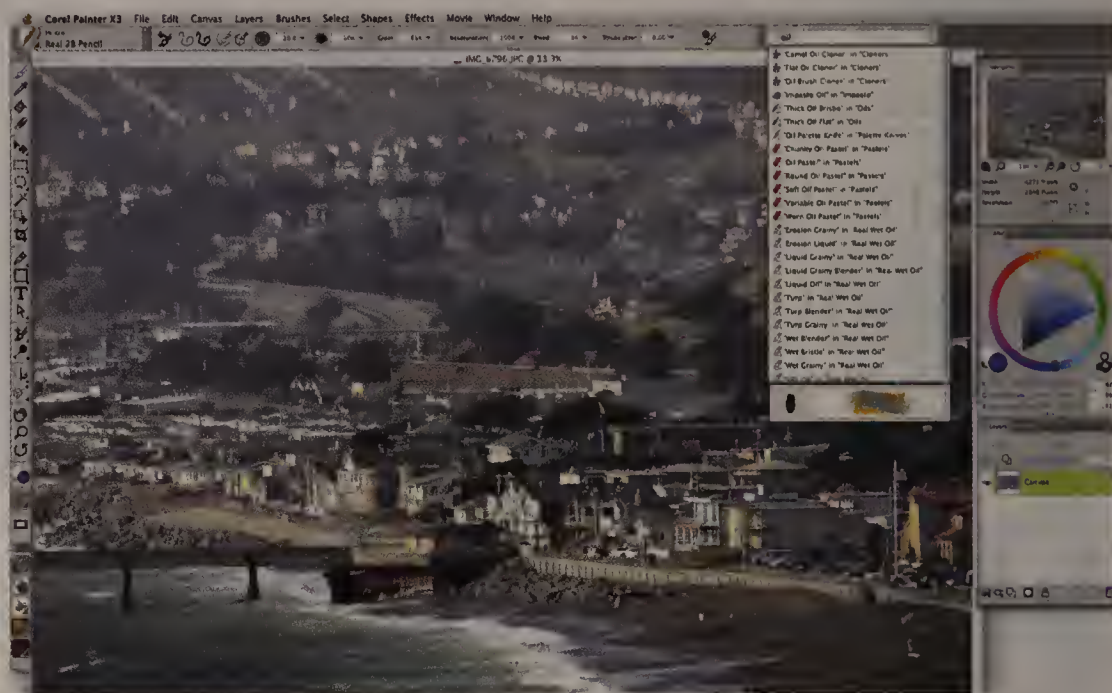
Painter X3 offers an enhanced user experience, workflow optimization, and new technologies for brush characteristics and controls, painting and visual aids, and inspirational details and customization options. With this release, digital paint grows ever closer to actual paint in look and behavior. At the same time, Painter's major features have become easier to find and use.

Brush Improvements

Painter X3's Jitter brush enhancements introduce greater randomness to strokes, by adding universal Jitter properties to any available brush or in the form of one of the 25 new Jitter brushes. Jitter brings unpredictability to a brushstroke—you allow the program to change a certain brush characteristic on its own.

A new Brush Search Engine lets you find the brush you're looking for by typing search terms, such as names or properties, in the search bar. An enhanced Live Stroke Preview offers a more detailed preview of the brushstroke that will appear on the canvas. The preview visually represents brush parameters such as mixing, erasing, blending, and jitter. Painter X3 has nearly 1000 brushes in 30 categories.

To help you change brush properties more easily, Smart Brush Controls display only settings you can tweak for that brush.



Painting Assistance

Painter X3 provides enhanced cloning assistance. With crosshair cloning, you can clone from an original source image and view your strokes from the crosshair reference point. You can change the source image and continue to clone in real time from the edited version, or switch back and forth between the original and edited images for cloning.

Perspective Guides let you use preset guides to draw accurately in one-, two-, or three-point perspective. Perspective-Guided Strokes snap strokes toward vanishing points that you can set. This function replaces the old Perspective Grid feature.

The Reference Image panel lets you open an image so that it appears inset in the image you're currently working on, so you can see it without having to toggle between windows. You can zoom, pan, and sample colors from the reference image while focusing on your current

Brush Work Painter X3's Search Brushes bar lets you type in a search term, find the brush you want, and view it in the Live Stroke Preview.

painting; and you can apply a transformation to a selection across multiple layers.

Inspirational Mixer Pads let you sample, choose, and mix colors from mixer pads created by expert Painter artists.

Flow Maps mimic the way watercolor and oil brushes apply paint across a real canvas or other surface—producing less saturation at the peaks of the surface's texture and more saturation in the valleys.

With this release, Corel offers more interaction with Painter artists via online Paint Jam sessions. Each month, the Paint Jam sessions will focus on a different style of art, hosted by professional artists who share their processes and techniques.

Pricing and Availability

You can download Painter X3 in English from Corel (corel.com/painter) or buy a box version. The full version of Painter X3 is \$429; upgrades for Painter 11 and 12 cost \$229. Commercial and education volume licenses are available. The program runs on Mac OS X 10.7 or 10.8.

Painter X3 offers new technologies for brush characteristics and controls, painting and visual aids, and inspirational details and customization options.

Seamless Stitching Pano and similar apps combine multiple photos into a spectacular wide vista.



Make Panoramas the Easy Way

Photographic panoramas are easy to produce with a bit of special-purpose camera gear or software.

BY DAVE JOHNSON

Some scenes are simply too epic to fit into an ordinary picture frame. Consider this: Your usual field of vision is about 200 degrees, but a typical digital camera can see only about a quarter of that—which is why a photo of a breathtaking vista can look a lot less impressive than the actual view you remember.

In the old days, people sometimes made massive panoramas by arduously combining multiple photos, using a razor and tape. These days, whether you have a camera or a smartphone, technology makes the task easier: With just a few clicks, you can capture a large vista in an impressively oversize panoramic photo.

Panoramas by Phone

When it comes to making panoramas, most iPhone owners have it easy: They just turn on panorama mode (available under the Options button at the top of the Camera screen), and then generate a panorama in a single fluid, sweeping motion after tapping the shutter release icon. (Tip: You can change the panning direction by tapping the panorama bar in the middle of the screen.)

If you don't like the sometimes-jagged panoramas that result, or if you have an older iPhone that can't create panoramas automatically, you have other options. One of the best panorama-stitching apps for the iPhone is Pano (go.macworld.com/

These days, whether you have a camera or a smartphone, you can capture a large vista in an impressively oversize panoramic photo.

pano). This \$2 app enables you to produce sweeping vistas composed of up to 16 photos (with a final resolution of 24 megapixels). The image quality is excellent, with superb alignment and blending. The interface works extremely well, thanks in part to a guide that helps you line up each subsequent photo.

Long, flat panoramas aren't your only option, however. To make fully immersive 360-degree panoramas that connect end-to-end, like a photographic cylinder, check out the aptly named 360 Panorama (\$1, go.macworld.com/360pan), which

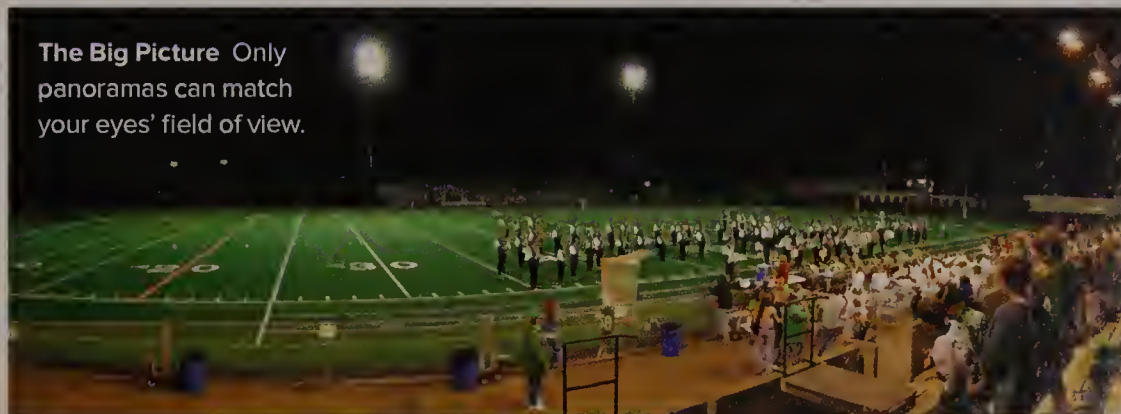
automates everything. Just hold up the camera and start panning in a circle. The app snaps and stitches on the fly, so when you complete your spin, you have a complete panorama that you can swipe to see all 360 degrees of the landscape.

Panoramas by Digital Camera

Like smartphones, some digital cameras come with built-in panorama modes that make creating a panorama a one-click affair. If your camera doesn't have such a mode built in, you'll have to turn to an app to get the job done.

One popular option is a program called AutoStitch (go.macworld.com/autostitch). It works with any collection of images—you don't have to tell the program what the right order is, nor do you need to drag and drop anything. Feed it a set of photos, and the app arranges them automatically. AutoStitch is free as long as you use the resulting panoramic photos according to the license agreement.

The Big Picture Only panoramas can match your eyes' field of view.



Premiere Pro CC Moves to the Cloud

Closed-captioning capabilities highlight the new cloud-based update to Adobe's Premiere Pro.

BY ALAN STAFFORD



Review

RATING
★★★★★

PRICE
\$50/month (full Creative Cloud subscription);
\$20/month (stand-alone subscription)

COMPANY
Adobe

URL
adobe.com

The latest version of Adobe's pro-level video-editing application, Premiere Pro CC (go.macworld.com/premprocc) gets a slew of modest tweaks as it joins its Creative Cloud suitemates online. These tweaks indicate that Premiere Pro is adding features

as Adobe develops them, rather than saving them for monolithic annual releases.

SpeedGrade Gets Good Grades

One new item is the Lumetri color engine—from Adobe SpeedGrade (go.macworld.com/speedgrade6)—a GPU-accelerated color grading and correction application. You can drag a Lumetri look (Cinematic, Desaturation, Style, or Temperature) onto a clip in the timeline, or onto an adjustment layer covering multiple clips.

Another cool new toy, the Loudness Radar, displays a visual representation of your timeline's loudness over time, with peaks and valleys on a circular graph. You can then use other controls to keep your volume within legally acceptable limits.

When you're editing video captured from multiple cameras rolling at once, and cutting from one camera view to another, Premiere Pro can synchronize the clips by analyzing audio from your source clips.

Premiere Pro uses metadata and its own search engine to find files. After clicking a

Locate button, you can navigate to a folder where you think the files are, or use a Search button to scan an entire folder. When you confirm that the software has found the right file, Premiere Pro matches up the other assets in that same location.

When you copy attributes—opacity, motion settings, effects, and so on—from one clip, you can paste them selectively to another clip in the timeline.

Video Open for Captioning

Premiere Pro CC greatly improves on the previous version's support for closed captioning. As with Premiere Pro CS6, you can import closed-caption files, but now you can import additional formats. And with the assistance of a new Captions window, you can edit them, too, or even create them from scratch. If you

Plenty Going On Premiere Pro CC's Interface is more stuffed with features than ever, but confining things to tabs helps manage it all.

When you go to export your video file, you'll find a new Captions area. You can embed closed captions in a QuickTime file, but if you choose another video file format, you must export closed captions as a sidecar file, in one of four different export formats—Scenarist Closed Caption (.scc), MacCaption (.mcc), W3C/SMPTE/EBU Timed Text (.xml), or EBU N19 Subtitle (.stl). YouTube, by the way, allows you to import files in any of these formats; other sites' support varies, of course.

As with other Creative Cloud applications, your subscription entitles you to install Premiere Pro CC on two machines, and you can sync your settings between

When you're editing video captured from multiple cameras rolling at once, Premiere Pro can synchronize the clips by analyzing audio from your source clips.

import QuickTime files with embedded captions, the captions will appear in the new Captions window. You place captions as a track in the timeline, but you can adjust the in-and-out points only in the Captions window. You can change captions' position and color—even on different lines, to designate different speakers—but some caption formats do not allow you to change text size.

them. Because the syncing arrangement is separate from the licensing system, you can log in on a computer that has someone else's Creative Cloud subscription enabled and sync your settings on that machine. It's still an installed application rather than a cloud one, though, so you'll have to rely on the host system's resources. As of this writing, Creative Cloud's Web fonts and files syncing is not yet working.

Adobe Scores With After Effects CC

New features give motion-graphics pros much-needed integration with true 3D object animation.

BY JEFF FOSTER

Review

RATING



PRICE

\$50/month (full Creative Cloud subscription); \$20/month (stand-alone subscription)

COMPANY

Adobe

URL

adobe.com

Enhancements to Adobe's After Effects CC (go.macworld.com/aftereffcc) make it a must-have partner for animators and video editors working with Premiere Pro CC.

Features such as a live 3D workflow with Cinema 4D Lite (go.macworld.com/4dlite),

now included with Creative Cloud, give motion-graphics artists and compositors integration with true 3D object animation.

In addition, some tool upgrades make the CC version better for compositors and animators. Also new are the enhanced 3D Camera Tracker, bicubic sampling for layers (similar to scaling in Photoshop), and the ability to send a comp to render through the Adobe Media Encoder, so you can work in After Effects while your project renders in the background.

Two primary benefits of Creative Cloud are continuous upgrades and the software license's accessibility and flexibility. New features or tool enhancements become available as soon as the developers test them and ready them for distribution. And after logging in to Creative Cloud, you can download, install, and use After Effects CC (and other CC software) on your clients' machines. When you log out, the software remains installed, but it's not functional until you log in on the next visit. Best of all, you can sync your user preferences and settings when you change machines.

Roto Brush Gets a Boost

The new Refine Edge Tool (for use with Roto Brush) makes getting a clean edge around features like hair, animal fur, or trees on a horizon as easy as wiping a brushstroke over the edges where you need more detail. Use the Roto Brush to select the general area you want to track, and then select the Refine Edge Tool to



paint over edges that need more-detailed refinement. This arrangement lets you give the sky a different effect or color-grading treatment than the foreground.

Also new to the Refine Edge Tool settings are Refine Hard Matte, for smoothing the often-aliased edges of a mask, and Refine Soft Matte, for a soft feather in an alpha channel without pixelation.

Enhanced Tools and Features

Another updated tool is the 3D Camera Tracker, which you can use to define a ground plane or reference plane. Now, repetitive track points get deleted along the track path when you delete the first selection, optimizing the tracking data in situations where you don't need objects in motion to track in the scene.

The Warp Stabilizer VFX effect provides better control than the previous Warp Stabilizer. Among the key features added

New Dimensions Maxon's Cinema 4D Lite app allows you to perform simple 3D modeling and animation tasks in After Effects CC.

to the effect are Preserve Scale, Objective, and Auto-delete Points Across Time. Reverse Stabilization and Apply Motion to Target help stabilize shaky footage.

The new Pixel Motion Blur effect is particularly useful for matching animations, motion graphics, and high-frame-rate video to slow-shutter film-look footage shot at 24 frames per second.

Other great new features include footage clip reloading and a function to find missing files, effects, and fonts.

Cinema 4D Lite

To improve 3D integration, After Effects CC provides the Cineware effect plug-in, for using Cinema 4D files in your composition. Cinema 4D Lite comes with Creative Cloud, and you can upgrade to the full version of Maxon Cinema 4D at a discount.

You can create a new C4D file inside After Effects CC. The Cinema 4D Lite app that it launches supports basic modeling, object animation, and camera moves, and lets you open existing C4D models, including texture and bump maps. You can easily edit maps in Adobe Photoshop CC.

The new Refine Edge Tool makes getting a clean edge around features like hair, animal fur, or trees on a horizon easy.

Help Desk

Answering Your Questions and Sharing Your Tips About Getting the Most From Your Mac

Mac OS X Hints

The insider tips you won't get from Apple.

BY LEX FRIEDMAN

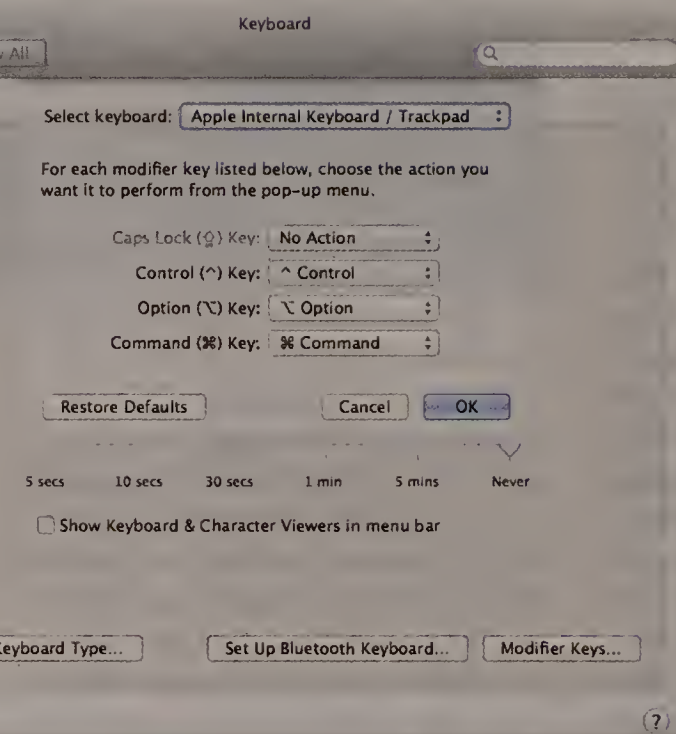
Disable Caps Lock (or at Least Get a Warning)

Few of us ever really want Caps Lock turned on; when we do hit that dreaded keyboard toggle, we do so accidentally. One work-around is to disable Caps Lock. Go to System Preferences, and select the *Keyboard* preference pane. Under the *Keyboard* tab, click the *Modifier Keys* button. Finally, using the drop-down menu, set Caps Lock to *No Action* (or have it pull side duty as a bonus ⌘, <Control>, or <Option> key).

But what about folks who want the option to quickly enter a mode for NONSTOP CAPITALIZATION, yet still wish to avoid triggering said mode by mistake? For those troubled typists, the answer is the free utility CapSee (www.threemagination.com). Install it, and your Mac displays an unmissable on-screen indicator when it's in Caps Lock mode. ISN'T THAT GREAT?

Dial Extensions on an iPhone Easily

Whether you frequently call someone who is at extension 123, or you know that to speak to a human in tech support you need to press 2, then 1, then 2 again, you've no doubt faced the annoyance that is dialing



No More Caps Disable the Caps Lock function by setting the key to 'No Action'.

such numbers on your iPhone: You have to pull the phone away from your ear, tap the Show Keypad button, and so on. There's a better way! You can add details to a phone number so that your iPhone punches the right buttons on its own. When you're editing a contact's details, tap the +*# key at the bottom left to insert a Pause or a Wait. A Pause (represented by a comma) tells your iPhone to pause 2 seconds and then dial the numbers that come next. (You can insert multiple consecutive Pauses.)

A Wait, represented by a semicolon, adds a custom button next to the red End button on the phone-call screen; you tap that button to dial whatever series of digits you entered after the semicolon.

Get Directions and Details From Siri

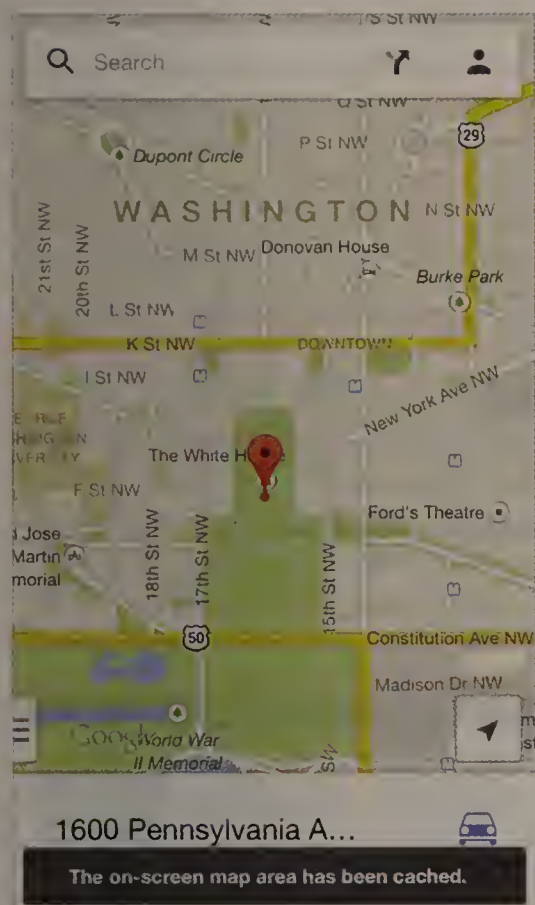
You may already know that you can ask Siri for directions. For example, you might say "Take me home" when you're out and about. But you can say a few other things while your iOS device is helping you navigate. Ask Siri, "Are we there yet?"—or use a less

obnoxious version of that query, such as "How much longer?"—and you'll get an update on your estimated time of arrival. You can be more specific, too. Ask "When is my next turn?" and Siri will give you the number of minutes until you should encounter it. Tank running low? Ask Siri where the nearest gas station is, and you'll receive suggestions for fill-up spots along your route. If you tap one, though, you'll cancel your current navigation, and Siri will start directing you to the new destination instead.

Use Google Maps Offline

Relying on Siri for directions means trusting Apple's Maps app, which may not be your preference. Google Maps for iOS uses the search giant's mapping data—and also lets you cache maps for offline

You can add details to a phone number so that your iPhone punches an extension on its own.



Offline Maps Google Maps' caching ability is useful for navigating in areas with unreliable cellular data service.

access. If you use Google Maps on a Wi-Fi-only iPad, or if you travel in locations where cellular data service is spotty, knowing how to enable offline caching of map data is pretty important. Here's how to do it (you wouldn't guess it on your own). First, zoom in a bit, because you can't cache a widely-zoomed-out map view. Then, when you're at the spot you would like to cache, type **OK maps** into the search box, and then tap *Search*. A Google Maps icon will appear briefly, followed by a message indicating that your map data was saved. Now, even when you're offline, if you navigate to the cached areas, the map data will appear.

Help Apple Stop iMessage Spam

If you haven't been hit by iMessage spam, consider yourself lucky: It's awful. It's even worse when you realize the spammers can know with certainty that the message was delivered to you. Apple recently introduced a way to deal with unwanted iMessages. Unfortunately, reporting such spam to Apple requires multiple steps. On the plus side, taking time to do so ought

to help Apple reduce such spam overall.

When a spammy iMessage arrives, take a screenshot. (If you got the spam on your iOS device, press the *Home* and *Sleep/Wake* buttons simultaneously. If it's on your Mac, use ⌘ -<Shift>-3. The screenshot will be in your iOS camera roll, or on your Mac's desktop.) Apple also needs the complete email address or phone number of the party you received the message from. You can take a screenshot of that data too, or copy and paste it. Last, compose an email to imessage.spam@icloud.com. (If you get a lot of said spam, save that address as a contact.) Attach the screenshot, and include the sender details and the date and time you received the message. You won't see immediate action, but with luck Apple will pool such user reports and eliminate spammers from its iMessage network. And if all this seems like a lot of effort, remember that iOS 7 lets you block unwanted callers, texters, and iMessage senders yourself, no screenshots or email required.

Make Safari Open Tabs on the Left

By default, new tabs in Safari open on the right. But some folks want directional freedom; they yearn to break free from the tyranny of "the right is right" when it comes to tab creation. You accomplish this leftyism with AppleScript; the code below is from *Hints* reader xhinter. Once you've created the script, you can even give it a custom keyboard shortcut.

Make a UTC Dashboard Clock

The OS X Dashboard lacks a Clock widget specifically for GMT/UTC (Coordinated Universal Time), the standard on which all time-zone offsets are based. If you want a UTC clock, you might choose London; that city, however, is on Greenwich Mean Time most of the year but not always on UTC, because it observes daylight saving time. To create a clock that always displays UTC, use Freetown in Africa (Sierra Leone). Freetown uses UTC+00:00, and doesn't ever change throughout the year.

Script Box: Safari Tabs

```
tell application "Safari"
    if windows is {} then
        make new document
    else
        tell first window
            if miniaturized then
                set miniaturized to false
            make new tab at beginning with properties
                {URL:"bookmarks:///"}
            set current tab to first tab
            tell application "System Events" to tell process
                "Safari" to tell menu bar 1 to tell menu bar item "File"
                to tell menu 1 to click menu item "Open Location..."
            else
                make new tab at beginning with properties
                {URL:"bookmarks:///"}
            set current tab to first tab
            tell application "System Events" to tell process
                "Safari" to tell menu bar 1 to tell menu bar item "File"
                to tell menu 1 to click menu item "Open Location..."
            end if
        end tell
    end if
end tell
```

Mac 911

Solutions to your most vexing Mac problems.

BY CHRISTOPHER BREEN

Get the Best Amazon Deal

While discussing movies with a friend, I realized that I didn't own copies of Alfred Hitchcock's greatest films. Hoping to remedy that, I dashed to Amazon and found *Alfred Hitchcock: The Masterpiece Collection*. The Blu-ray set looked great, but the price—about \$175—did not.

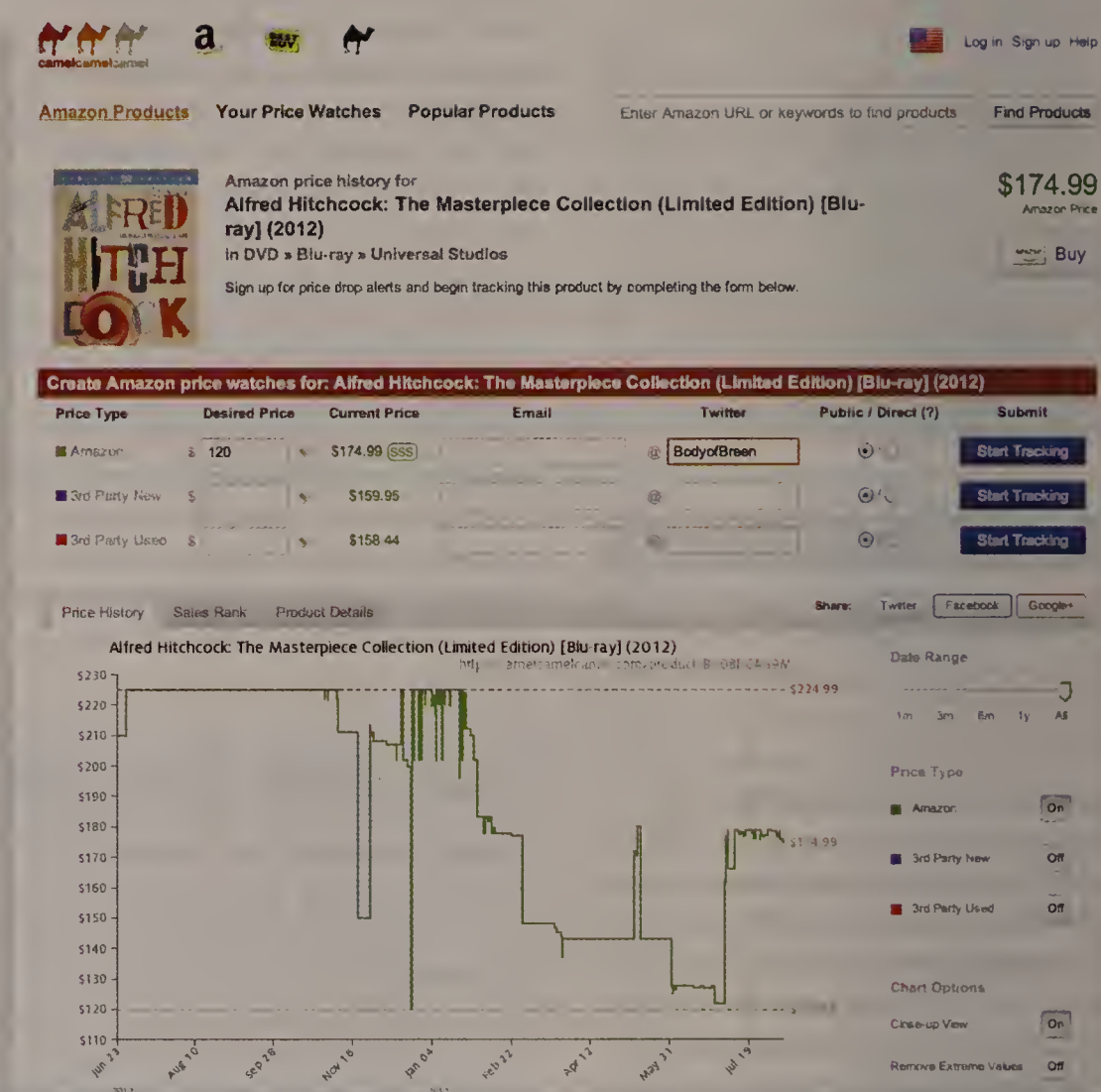
Reviews indicated that the collection has been available for as little as \$120, a more palatable price. But how was I to know when it reached such a discount? I turned to Twitter for answers.

Follower John Coxon (@johncoxon) told me about the Web-based service Camelcamelcamel (camelcamelcamel.com), which allows you to enter the URL for an item you wish to track. You can view a history of the item's price to get a ballpark idea of how low it has been in the past. Then you enter the price you're willing to pay, and choose either email or Twitter alerts (see "Bargain Hunter").

Mike Hoffman (@MikeHoffman) pointed me to Delite Studio's Mac app Prices Drop Monitor for Amazon (go.macworld.com/pricesdrop). Download and install it, and a shopping-cart icon appears in the Mac's menu bar. In your Web browser, just navigate to the item of interest and drag its URL to that menu-bar icon. When the price of that watched item drops, you'll be notified by way of a sound, Notification Center, Growl, or email (your choice). The free app tracks up to 20 items; a \$4 fee lets you monitor up to 50 items at a time.

Chris Lehmkuhl (@ChrisLehmkuhl) and Dave Packard (@cpadave) told me that all I have to do is add the item to my Amazon cart and leave it there, unpurchased. When the listing's price changes, the Amazon shopping cart produces a notification.

And finally, I have a solution of my own. In Safari go to the item's Amazon page and choose *File* → *Open in Dashboard*.



This option is the means for creating a Web clipping. Select the item's price area, and click *Add* to make that clipping appear in Dashboard. Because clippings update whenever you switch to Dashboard, you merely need to invoke Dashboard to view the item's current price.

Fix iTunes' Truncated Tracks

Q: iTunes truncates the last 15 seconds of tracks and jumps to the next track. I don't have crossfade on, and the effect seems more prevalent on ripped CD tracks I own. I have not subscribed to iTunes Match. What might the problem be?

Mike Barlow

Bargain Hunter Camelcamelcamel helps you choose the best time to buy items online.

A: You can do a few things to pinpoint where the problem lies. First, select one of the shortened tracks and choose *File* → *Show in Finder*. A Finder window will open. Press the spacebar to preview the track, and drag the playhead to the end to confirm that the entire track is present. (It probably is.) You have now determined that the problem isn't with the track but with iTunes. This step saves you the trouble of rerepping.

To make sure, return to iTunes, select the track, press ⌘-I, and in the *Options* tab confirm that *Stop Time* is not enabled. (For those not in the know, you can shorten track playback by adjusting start and stop

times in this tab.) This option is highly likely to be set as it should be, but confirming that it helps you eliminate it as a suspect.

The next step is to delete the track from iTunes, but not from your Mac. The system will first ask if you're sure that you want to delete it. Confirm that you are. Next it will ask whether to delete the track from your Mac. This is something you don't want to do, so click *Keep File*. Now return to where the track is stored on your Mac, and re-add it. With a modicum of luck, it will play as it should, from beginning to end.

No? Then quit iTunes and, while holding <Option>, relaunch it. The Choose iTunes Library window will appear. Click *Create Library* and save the new library to your Music folder. Navigate to one of the troublesome files, and drag it into iTunes to add it. Click the play button and see if it plays to the end. If so, your problem is with the iTunes database in your previous library. You can try to re-create that database; see go.macworld.com/recreateitunes for Apple's instructions. The gist is that you quit iTunes, navigate to the iTunes folder (*youruserfolder/Music/iTunes*), drag the iTunes Library.itl file to the Trash, and move the iTunes Library.xml file to the desktop.

Now launch iTunes, where you will find an empty library. Choose *File → Library → Import Playlist*, navigate to the iTunes Library.xml file on the desktop, and click *Choose* to reload your library, complete with playlists, song ratings, and play counts.

Create a Bootable iPod Classic

Q: Listening to a Macworld podcast, I was intrigued by your tip about using an iPod to boot and troubleshoot a Mac. Can you provide the steps?

Kirk Aplin

A: Configuring the iPod is reasonably easy. (Warning: Doing this will wipe all the media off your iPod. Make sure that you have a backup of those files before proceeding.)

Plug the iPod classic into your Mac, using the standard dock-connector-to-USB cable. If iTunes launches, quit iTunes. Launch Disk Utility (found in Applications/Utilities). Within Disk Utility select the iPod in the list of devices to the left. To the right, click the

Bugs & Fixes BY TED LANDAU



Safari, Heal Thyself!

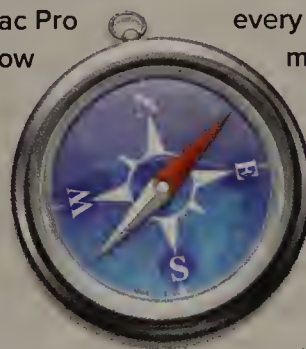
Overall, Safari admirably meets my requirements for a Web browser. Plus, as it is an Apple product, I appreciate its tight integration with OS X and iOS. But then there's Safari's "dark side." All too often, something goes haywire. Webpages fail to load, or the program crashes.

For example, using my Mac Pro recently, I had a Safari window with eight tabs. Inexplicably, the content of every tab no longer appeared if I started scrolling down the page—that is, as soon as I scrolled, all I saw was a blank white space.

Copying a URL and pasting it into another Safari window did not help. Reloading a page often made the situation worse, resulting in a totally blank page with the URL now "lost" as it was gone from the address bar. Quitting and relaunching Safari did not restore the pages to normal.

Focusing first on the lost URLs, I tried checking Safari's History. Several of the pages had been open for so long, however, that they no longer appeared among the recent History items, so I would have had to search for them. In addition, some pages originated from sources such as Twitter, so their URLs in History appeared in unidentifiable shortened versions.

Here's where I tripped over a feature of Safari that came to my rescue.



Even though the URL was missing from the Address bar, the name of the webpage was still visible in the title bar above. I created a new tab and began typing the name of a desired page, and then Safari's autocomplete kicked in, including a drop-down menu of suggested URLs plus a Bookmarks and History section. This menu listed every webpage in my History, no matter how old, that contained the text I had typed. It also listed URLs in full, even if they showed as shortened URLs in the History menu. With these lists, I recovered every missing URL.

Unfortunately, with or without the URLs, the pages still didn't load properly. That's when I remembered that I had a MacBook Pro as well as a Mac Pro. I opened my MacBook Pro and launched Safari. As I had enabled iCloud Tabs, I could see a list of all the tabs in Safari on my Mac Pro and open them in Safari on my MacBook Pro. The pages opened correctly! From here, I could reread or save the pages. Now I could go back to my Mac Pro, close the tabs, and get Safari humming again. Problem solved. If you don't have a second Mac but you do have an iPad, you can accomplish the same basic feat, although saving webpages will be more work.

Share your Mac-related problems by writing to bugs@macworld.com.

Partition tab. In the Partition Layout pop-up menu, choose *1 Partition*. The *Options* button below the partition area becomes active. Click it. In the sheet that appears, select *GUID Partition Table* and click *OK* (see "Setting the Table" on page 105). Click *Apply*. Your iPod will be formatted so that it can serve as a startup volume.

Now, find the copy of the OS X Mountain Lion installer on your... What? You don't have it because it was deleted after you originally installed Mountain Lion? Launch the Mac App Store, click the *Purchased* tab, and

locate 'OS X Mountain Lion' in the list. Click *Download*, and wait for it to do just that.

If you bought a Mac with Mountain Lion preinstalled, you don't have the installer. Our OS X installer expert, Dan Frakes, tells you how to work around this problem at go.macworld.com/bootable (yes, the article title refers to Lion, but the advice applies to Mountain Lion as well).

Regardless of how you obtain the installer, move it outside the Applications folder so that it won't be deleted after it does its job. Launch the installer, choose

the iPod as the target, and run through the process as you would with any drive. When the installation is finished, boot from the iPod and install any troubleshooting tools. Restart the Mac, booting from its regular startup drive, and tuck the iPod away.

Five Reasons to Buy an iPad

Q: I'm a senior citizen who is reasonably comfortable with a Mac. But younger members of my family are urging me to purchase an iPad. I don't see why I need one when I have my computer. Care to weigh in?

via the Internet

A: It's been my experience that you can't truly understand how useful an iPad will be to you until you live with one. That said, I can provide some observations.

Portability: The main attraction is that you can carry an iPad wherever you go. If I want to check email or Twitter, or to look

something up, I needn't traipse downstairs to my Mac. I can do it all from the comfort of my kitchen, couch, or conservatory.

The drawback of owning such a portable and powerful device is the temptation to bang away on the thing constantly. Having to make a trip to the "computer room" is often enough to keep you from checking Facebook or Instagram every few minutes. Putting down your iPad while you participate in the real world requires discipline.

Access: All iPads work with Wi-Fi, but if you invest in the cellular model (which costs \$130 more than the Wi-Fi-only one), your iPad will be able to work just about anywhere, much as your mobile phone does. Yes, you have to pungle up a fee each month, but it means that your iPad can almost always reach the outside world. That's a helpful feature when you need to perform light digital duties away from home or the office and Wi-Fi isn't available.

Ease of use: With iOS, Apple has tried to redefine what it means to interact with

computing devices. While some computer veterans believe that an iPad's interface is dumbed down, not everyone wants the power and flexibility that an open operating system allows. Many people want a device that lets them easily perform the tasks that interest them. The iPad does so admirably. Once you master tapping items, and once you learn how to swipe from place to place, you're well on your way.

Workspace: Regardless of how powerful a phone may be, its small screen is an impediment to performing tasks.

If you're accustomed to working on your phone, you'll be thrilled with the elbow room the iPad provides. You may not be able to type as quickly on the tablet as you can on your Mac keyboard, but I guarantee you'll get things done a heck of lot faster than you do with your thumbs on a phone.

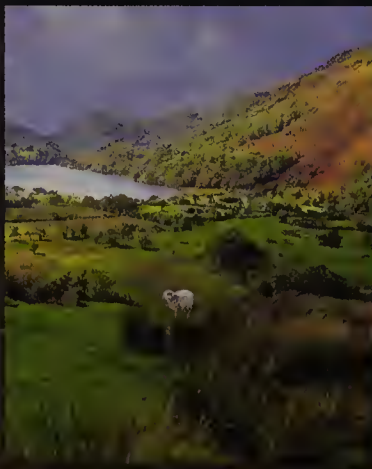
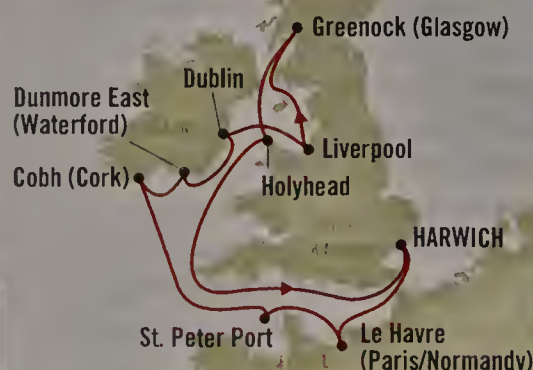
Apps: This may be the greatest advantage of all. If you're a longtime Mac user, you know that Mac software pickings used to be slim. The iPad has no such problem. Last

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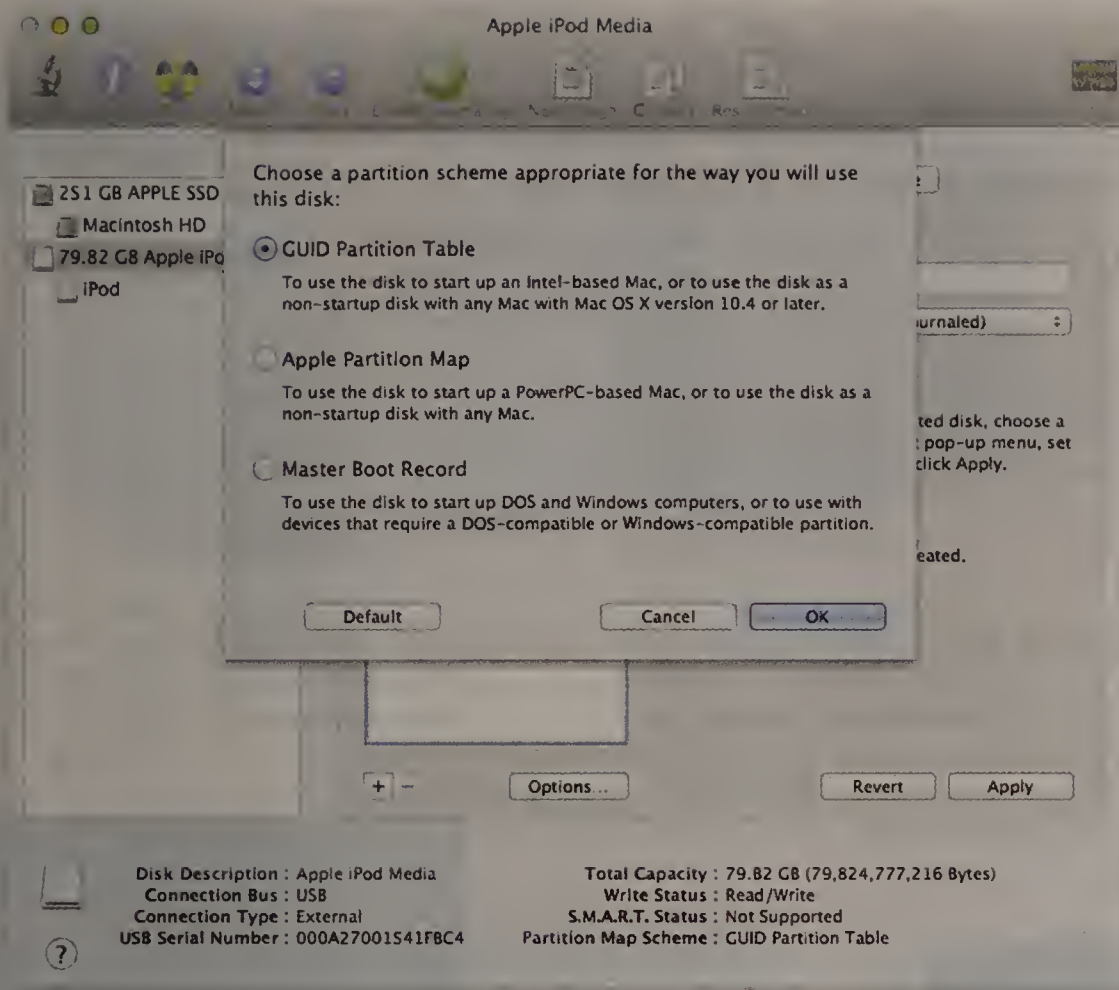


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Setting the Table Before an iPod can serve as a bootable drive, you must format it using the GUID Partition Table option.

time I checked, over 375,000 apps were designed for the iPad. Even if only 1 percent of them were worthwhile (and far more than that are), that would be 3750 solid apps. With those apps you can read books, create works of music and art, start a journal or blog, organize your life, entertain and inform your kids and grandkids, capture and edit movies and pictures, make and receive free video calls, enjoy music and movies, spend unhealthy quantities of time on Facebook and Twitter, and fling birds at pigs.

Want a reason why you shouldn't buy an iPad? Because everyone else is doing it. Some people are content to confine their computing to the Mac or PC in the back room. Real people, real events, real life are more important than their virtual counterparts. If the benefits I've outlined sound like they'll enhance real life, though, give it a go.

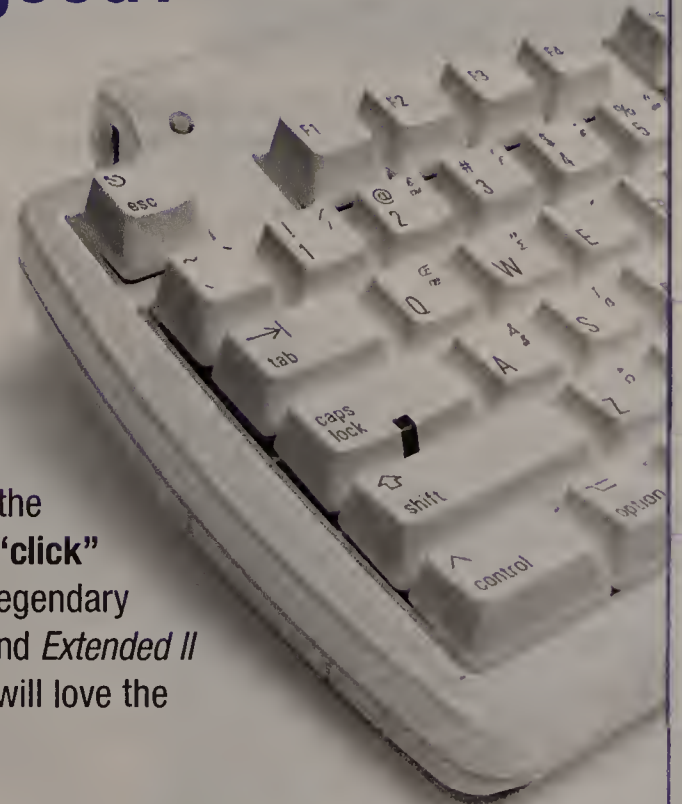
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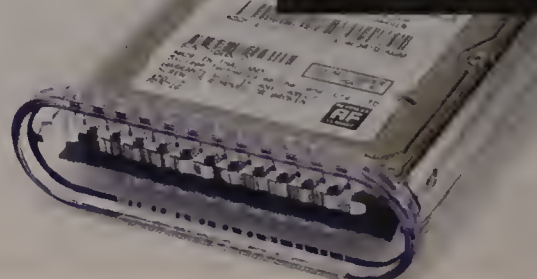
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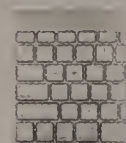
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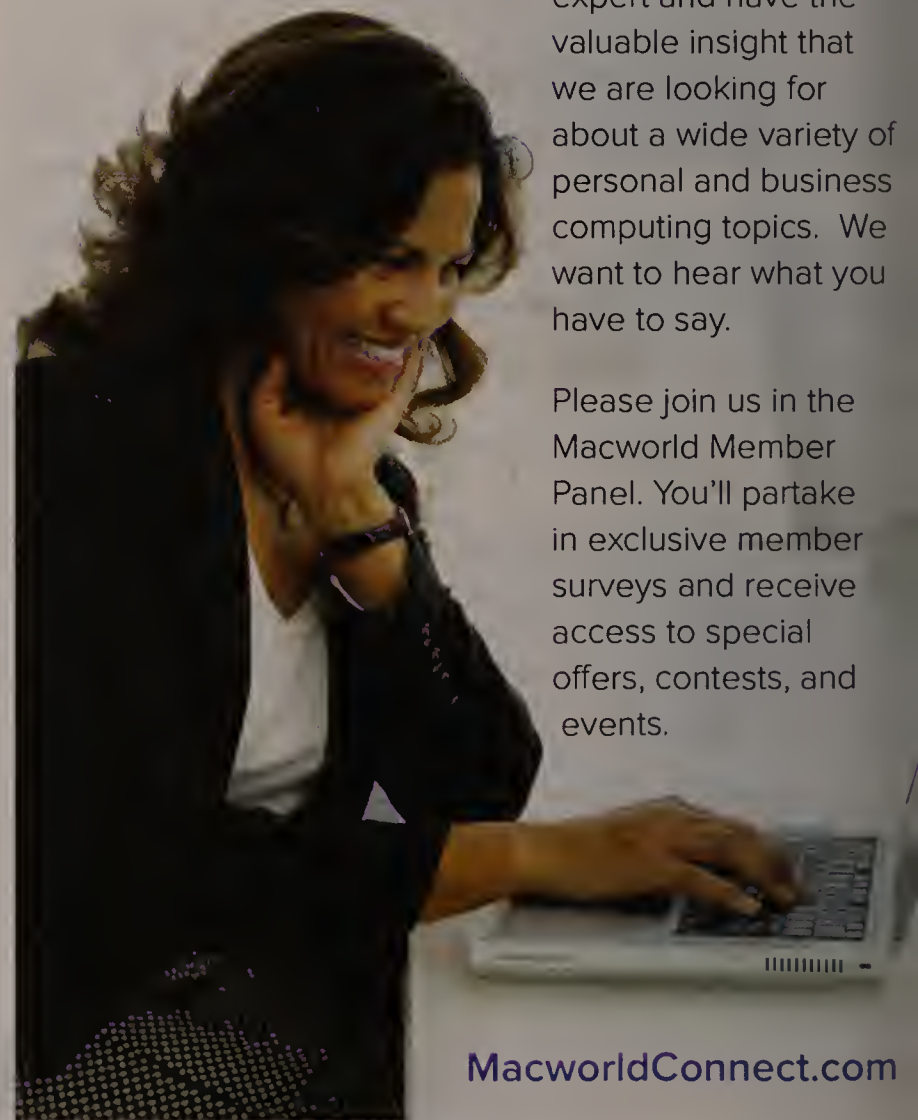
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Macworld



A Design Pro at Work

Design Director Mike Monteiro explains his Mac setup and the other tools—cutting-edge and old-school—he uses to get stuff done.

Who are you, and what do you do?

I'm Mike Monteiro. I'm a designer by trade, and the design director at Mule Design (muledesign.com). I suppose I'm also a writer. Both are accidental.

What hardware do you use?

I just got a new **13-inch Retina MacBook Pro**, so I'm still in the honeymoon phase. I spend a lot of time staring at the screen and saying, "Wow, that's nice." I also have an **iMac** at work that's getting a little long in the tooth; it'll probably be put out to pasture as soon as Apple revs their displays and I get one to hook up to the MBP.

But that's all boring.

My secret hardware weapon sits on the corner of my desk. It's a **phone**. Plugged in to the wall and everything. You can do amazing stuff with it. For example, I've found that you can consolidate a 24-volley email thread with a client down to five

minutes if you call them on the phone. Not to mention you can actually hear them LOL. So I get a kick out of hearing people say they no longer use the phone.

I take notes in a **Moleskine**. I wish I could tell you that the notes were interesting, or that I "sketch" or whatever people now call it. But, honestly, it's all chicken scratch. I do, however, make a habit of writing down the name of everyone who's sitting around a table. I suck at remembering names. And I write with a **Uniball Roller**. Fine point. All other pens suck.

And what software?

I still use **Photoshop** quite a bit, but not as much as I used to. I use **Illustrator** when I need to, but never without breaking into a cold sweat as I dread how much time I'll have until it force-quits.

I wrote an entire book in **Google Docs**, which made everyone very, very nervous.

I've been toying with **Editorially** lately, and it looks very promising. I love **Keynote** probably more than anyone.

We use **Campfire** with **Flint** to communicate throughout the office, and **Basecamp** to communicate with our clients.

Haven't used a feed reader since Twitter launched. And I get that through **Tweetbot**, unless I'm on the desktop, in which case I just go to the website.

And I still prefer **Safari** to Chrome, because the Chrome UI is an eyesore.

What would be your dream setup?

An incredibly big worktable lined with bins full of Legos, sorted by color and shape. What? You did say dream.

(Disclosure: Mule Design has done design work for Macworld.com.)

Interview courtesy of **The Setup** (usesthis.com; Twitter: @usesthis).

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